The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 757.---Vol. XX.] LONDON, SATURDAY, FEBRUARY 23, 1850. [Price 6d.

FARMBOROUGH COLLIERY, NEAR BATH, SOMERSET.

MR. JOSEPH HILL respectfully announces that he has received instructions from the proprietors TO SELL, BY AUCTION, on the premises, on Tuesday, the 26th of February, 1850, all the

MACHINERY AND PLANT,

Lately used in Working the before-mentioned Colliery—Comprising

A very powerful and nearly new CONDENSING STEAM-ENGINE, with 31½-inch cylinder, 6-feet stroke, excellent winding and pumping apparatus, and wrought-iron boiler; 150 fathoms of 9, 8, and 6-inch pipes, with suitable working barrels and rods for plunger and lifting pumps; 2 plunger plugs, 9 feet long, 7½ inch diameter, 160 fathoms of 6¼-inch flat-rope, 2 drum ropes, 140 fms. each, horse drum, crab winches, 272 6-feet tram plates, pair of head stocks, 28 feet long, 6-feet pulley-wheel, large treble-power capstan and frame, 2 wrought-iron hudges, dung waggon and pit-runner, 2 cast-iron pillars, 11½ feet by 10 inches, cast-iron 3-inch wheels for wheelbarrows, new cast-iron socket, wrought-iron cap-heads, bell cranks, beds, brasses, and plummer-blocks, 2 wrought-iron screws and brass nuts, a quantity of oak and elm timber, anvil, bellows, vice, smiths' tools in general, a quantity of wrought-iron, a cart-horse, and many other valuable and useful lots not particularised.

N.B.—More descriptive particulars are in course of preparation, and will be ready for delivery 10 days prior to the sale, at the Greyhound Inn, Bath; Saracen's Head, Temple-gate, Bristol; or from the auctioneer, Paulton, near Bristol, Somerset.

Sale to commence punctually at Eleven o'clock in the forenoon; and to view, apply on the premises.—Dated Feb. 5, 1850.

CALLINGTON MINES—FORTY-SEVEN FORFEITED SHARES.

MR. C. WARTON is instructed to SELL BY AUCTION, without reserve, at the Mart, opposite the Bank of England, on Wednesday, the 6th day of March, at Twelve o'clock, FORTY-SEVEN SHARES in the CALLINGTON MINES, Cornwall, upon which £25 per share have been paid.

Particulars may be had at the Mart; and of Mr. C. Warton, auctioneer and estate agent, 38, Threadneedle-street.

TO COAL PROPRIETORS AND OTHERS.

TO BE SOLD, BY PRIVATE TREATY, TWELVE SIXTY-FOURTH SHARES in an extensive and excellent COLLIERY, situate in Parr, near St. Helen's, called the SANKEY BROOK COLLIERY, and of and in the PLANT of such colliery.

The Colliery is very advantageously situated for the disposal of the produce of the mines, having direct communication from the pit mouths with a branch of the St. Helen's and Runcorn Gap Railway, and having also a communication, by tramway, with the Sankey Canal. By the colliery having been in full work for many years, an extensive and lucrative connection has been established in the Liverpool markets, and the salt districts of Cheshire.

Further information may be obtained on application to Mr. John Mercer, mine surveyor, St. Helen's, at whose office plans of the colliery workings may be inspected; or to Messrs. Ansdell and Haddock, solicitors, St. Helen's.

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There will also be SOLD, along with the above, TWENTY SIXTY-FOURTH SHARES in certain SALT WORKS, near Northwich, known as the NEW BRIDGE SALT WORKS.

Further information may be obtained on application to Mr. John Mercer, mine surveyor, St. Helen's, at whose office plans of the colliery workings may be inspected; or to Messrs. Ansdell and Haddock, solicitors, St. Helen's.

VALUABLE COAL-FIELD, NEAR LIVERPOOL.

TO BE LET, BY PRIVATE TREATY, all those MINES, VEINS, or BEDS, of COAL, situate, and being under the lands of the late Mr. Wm. Lees, at WHISTON, near Prescot, in the county of Lancaster, comprising a COAL-FIELD of about FIFTY ACRES in extent, and consisting of the following MINES, commonly known by the names of the Cheshire Delf, the Ten Lands, the St. Sebastian, the Sir John, the Prescot Main Delf, the Rushy Park, and the Little Delf.

These coals are of the aggregate thickness of 47 feet, and range at various depths from 85 to 400 yards. With the exception of the Cheshire Delf, which has been partially worked, the mines are entire, and, by experiments lately made, it has been ascertained that they are free from water. It is proposed, in the first instance, to let only the four uppermost mines, which are of the aggregate thickness of 20 feet, and one of which, the Ten Lands, will average 9 feet of clear coal.

The estate is distant from Prescot 1 mile, from Liverpool 7 miles, and is intersected by the Liverpool and Manchester Railway, from a station on which, closely adjoining, there would be every facility for transporting the coals to the former important mart.

It may be also of importance to add, that the coals underneath the railway may be worked free from the harassing restrictions imposed by the Lands' Consolidation Act.

For further particulars, and to treat for the same, application may be made to Mr. James Green, coal agent, Parkside, Prescot; or personal inquiry may be made of Mr. William Wrigley, Abbey Hills, Oldham.

UNSTON IRON WORKS, NEAR SHEFFIELD.

MESSRS. RANGELEY, WRIGHT, & Co., invite the attention of IRON MANUFACTURERS, IRON FOUNDERS, &c., to their DERBYSHIRE PIG-IRON (smelted entirely with coke), which they can with confidence recommend for all purposes where purity of metal, combined with tenacity or strength, is an object. Their No. 3 pig-iron is sufficiently fluid for all descriptions of foundry-work. Piping made from this quality will admit of almost any amount of hydraulic pressure. As a mixture with tender irons, or for purposes requiring great strength, their No. 4 is particularly adapted. For FORGE PURPOSES, the loss from waste in cinder, &c., is much below the usual average, and the product a very superior iron.

Messrs. R., W., and Co. also beg to inform RAILWAY CONTRACTORS, ENGINEERS, GAS and WATER-WORKS COMPANIES, BUILDERS, MILLWRIGHTS, &c., that having purchased an extensive assortment of models and apparatus from Messrs. Wm. Graham and Co., of Milton Iron-works (who have declined business), and having engaged experienced workmen from that establishment, they are in a position to furnish ALL DESCRIPTIONS OF CASTINGS, suitable for the above branches, and at moderate prices.

IMPORTANT TO WATER COMPANIES, &c.—FIRST-CLASS PUMPING ENGINE FOR SALE.

THE WHITTLE DEAN WATER COMPANY, having brought their new works into operation, have discontinued the use of the powerful and excellent STEAM-ENGINE, previously employed in supplying Newcastle and Gateshead with water from the River Tyne, and they now OFFER IT FOR SALE BY PRIVATE CONTRACT.

The ENGINE is a condensing one of about EIGHTY-HORSE POWER, is very highly finished, in perfect order and condition, and has proved itself a most efficient one. It presents a very favourable opportunity to Water Companies, or other parties, requiring a first-class pumping-engine on moderate terms.—Apply at the office of the company; or to Mr. R. Nicholson, engineer, Newcastle-on-Tyne.

Newcastle, February 21, 1850. By order, D. D. MAIN, Secretary.

REAL DEL MONTE MINING COMPANY.—Notice is hereby given, that on Wednesdays and Saturdays, after the 10th day of April next, the sum of TWO POUNDS will be PAYABLE upon every RED DEBENTURE, and FOUR POUNDS upon every outstanding FIFTY POUNDS LOAN of 1827, being the first division of proceeds of sale of the Company's property. The Red Debentures, or the subscription receipts for the Loans, must be left with me, at the office, No. 6, Queen-street-place, Southwark-bridge, London, for at least one week previous to the payment of the dividend. The holders of the above-mentioned £50 loans of 1827 will, at the same time, be paid the proportion that may be due to them of the Trust Fund set aside in the year 1843.

By order of the Directors,

London, Feb. 11, 1850. JOHN PHILLIPS, Secretary.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES AND CLOCKS.

E. J. DENT, 82, Strand; 33, Cockspur-street; 34, Royal Exchange (clock tower area), Watch and Clock Maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE,

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

THE PATENT OFFICE AND DESIGNS REGISTRY.

No. 210, STRAND, LONDON.

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

STEAM-ENGINE.—TO BE DISPOSED OF a HIGH-PRESSURE STEAM-ENGINE—cylinder 18½ inches in diameter, 4 feet stroke, equal beam; fly-wheel 14 feet in diameter, double pumping crank, winding shaft, and winding verticals; 1 driving wheel, on the end of the fly-wheel shaft, and 2 spur wheels, on the winding and pumping shaft; a FIVE-TON BOILER, 28 feet long and 6 feet in diameter, egg ends, with the steam and water-pipes connecting the engine and boiler; safety valve, floats, &c. Also, 22 yards of 9-inch PUMP TREES, including clackpiece and windbore, bolts, &c. The engine is quite new, and has never worked further than to try it, and being now connected with the boiler, intending purchasers may see it at work, and it will be disposed of as it now stands, with all its apparatus complete, although not enumerated in this advertisement.

For further particulars, and to view the same, apply to Mr. John Slater, White Rose Colliery, Blackwood, Newport, Monmouthshire.—Feb. 1, 1850.

ECONOMICAL STEAM-ENGINE—Surpassing the Cornish.

CRADDOCK'S PATENT DOUBLE CYLINDER HIGH-PRESSURE EXPANSIVE AND CONDENSING ENGINE,

Alike ADAPTED FOR MARINE, LOCOMOTIVE, AND STATIONARY PURPOSES.

BOILER.—Tubular, free from deposit, and perfectly safe from explosion.
ENGINE.—Not half the weight or bulk of ordinary engines.
FUEL.—Not half that required by the best engines of the common kind.
WATER.—Under 1 gallon per horse-power per day of 10 hours, for all purposes, with air as the medium of condensation if desired.

These engines are erected at a comparatively trifling expense, and are easily worked.

FOR SALE.

TWO 40-horse power ENGINES, suited to condense either by air or water.
ONE 25-horse power ditto ditto ditto
ONE 20-horse power ditto ditto ditto
A PAIR of OSCILLATING MARINE ENGINES, of 10-horse power.

These engines are quite new, with boiler, condenser, and regulating damper—all got up in the best and simplest manner. They are much simpler, and almost beyond comparison more compact than the Cornish engine, also more safe and economical than even those engines, yet the price of the Cornish is nearly double that at which these are offered.—Parties wanting engines will find in the above good bargains.

Apply to THOS. CRADDOCK, engineer, 36, Broad-street, Birmingham.

Also ON SALE, THREE 4-horse HIGH-PRESSURE ENGINES, simply arranged, and well got up.

COMBMARTIN AND NORTH DEVON LEAD AND SILVER SMELTING COMPANY.

REGISTERED UNDER THE JOINT-STOCK COMPANIES' ACT.

The SMELTING-WORKS of the above COMPANY are in ACTIVE OPERATION.—SAMPLES of LEAD and SILVERY ORES are requested to be forwarded to Captain Cornelius Bawden, Combmartin, near Ilfracomb, North Devon.

Payment for ores by bill, at three months, or cash if required.

Combmartin, Jan. 1, 1850. THOMAS L. WILLSHIRE, Secretary.

CRAIG DDU SLATE COMPANY, FESTINIOG, MERIONETHSHIRE.—The Directors having decided on considerably EXTENDING THE WORKINGS of this VALUABLE QUARRY, in order further to develope the immense resources already laid bare, and to meet the great demand for the Slate, propose to ISSUE A LIMITED NUMBER OF THE RESERVED SHARES. Information will be afforded, and a statement given, at the company's offices, 25, Parliament-street, where application may also be made for shares; or to Mr. Farrar, the company's solicitor, Doctors'-commons.

EAST BIRCH TOR TIN MINING COMPANY, DEVON.

Incorporated pursuant to Act of Parliament, 28th November, 1849.

Divided into 2500 shares, of £3 each.

NO FURTHER CALLS required, and no liabilities beyond the amount of subscription.

Application for prospectuses, and the few remaining shares, to be made . secretary, Mr. T. A. Readwin, 7, Winchester-buildings, Old Broad-street, City.

GUADALCANAL SILVER MINING ASSOCIATION.—The following Requisition has been forwarded to the Directors of this Association:—

"London, February 8, 1850.

"To the Directors of the Guadalcanal Silver Mining Association.

"Gentlemen,—Some doubt having arisen as to the legality of the Preference Shares, in consequence of their not having been paid upon at the time fixed, and much confusion and deterioration of value having ensued, we, the undersigned, being ten shareholders holding one-fourth of the undertaking, hereby request you will forthwith call a Special Meeting of the Shareholders, for the purpose of at once deciding this important question, and also to inquire into the financial condition and future prospects of the undertaking."

Notice is hereby given, that A SPECIAL GENERAL MEETING of the Shareholders will be holden at the office of the Association, on Monday, the 11th day of March next, at Two o'clock precisely. By order, H. T. RYDE, Secretary.

34, Broad-street-buildings, London, Feb. 20, 1850.

CARADON VALE MINE, SAINT IVES, NEAR LISKEARD, CONWALL.

Purser—Mr. John Stephens, St. Ives, Liskeard; Mr. Charles Collins, Exeter.

Bankers—Mr. Sanders, Exeter; the Devon and Cornwall Bank, Exeter and Liskeard.

Solicitor—Charles Richards, Esq., Bedford Circus, Exeter.

This mine is situate in the parish of SAINT IVES, near LISKEARD, CORNWALL, and was worked upon by several poor experienced miners a short time since, to develope that which they felt convinced existed there—viz., rich copper ore. They drove an adit 70 fms. to hill, and sunk a winze 12 or 15 fms. under that adit to cut the lode, when to their dismay they were completely impeded by the large quantity of water issuing from the lode, they having only water-barrels to draw up the same; sufficient was, however, seen to know that rich yellow and black copper ore existed against the cross-course. There are seven lodes, well defined, and carrying the most extraordinary gossan that can be seen, with rich peach, prian, felspar, and ore, and every other qualification to convince miners that great riches exist beneath. It only, therefore, remains to employ a very small amount of capital to bring this mine into active work. It is situate in a delightful valley, in the vicinity of the very rich mines called South Caradon and West Caradon, not far from the granite hills. The mine will be worked with a water-wheel, at a very trifling cost, compared to the prospect of realising immense riches from this very valuable undertaking.

It is proposed that the mine be divided into 1536 shares, at FIVE SHILLINGS PER SHARE, being the first deposit, and the liability of each shareholder is not likely to exceed £4 per share, as it is not expected more than £1 per share will be required. The calls, too, are moderately fixed, not to exceed 5s. per share every two months; but it is believed that 2s. 6d. per share will be sufficient, and will be regulated at the general meetings of the shareholders. The duel to the lord are 1-15th, and the small sum of £250 is to be paid to the owners of the sett for preliminary and sundry expenses.

The mine is not one of a speculative character, but is brought forward on a sound basis, as regards prospects and results, and will be carried out and proved upon economical principles. The mine is about two miles from the Liskeard and Caradon Railway, thus offering cheap and convenient facilities for the transit of the ores.

A large number of the shares are already taken up, and 536 shares are reserved to the owner of the mine.

Application for the remainder may be made to Mr. Thomas Sanford, Exeter; Mr. John Stephens, St. Ives, Liskeard; Mr. Edward Suter, Exeter; Mr. James Timewell, Exeter; Mr. John Seymour, St. Cleer, Liskeard; and Mr. Henry Vatcher, Exeter.

To the Committee of Caradon Vale Mine.

Gentlemen,—Being in the neighbourhood of Caradon Vale last month, I was induced to visit a mine of that name, upon which operations had commenced to a small extent only, but quite sufficient to give a character to the undertaking of much importance in a geological point of view. The position of the ground, its general aspect, and nature of the rocks as far as the works have been carried, exhibit all the characteristics of a highly mineralised spot, well worthy the marked distinction Sir Henry De la Beche has given it in the Map lately published by Government. On the back of the lode there is a fine gossan interspersed with spots of ore. Independently of the undeniable symptoms for ore which the gossan exhibits, no miner will deny that the country, or killas, may be compared to any of the best mines in the county, and, in my humble opinion, fully warrants the prosecution of this undertaking without any doubt of an early and successful issue.—Edward Suter: *Exeter, December 12, 1849.*

WEST POLGOOTH MINE.—Notice is hereby given, that the committee of management will be ready to RECEIVE TENDERS from persons desirous of SUPPLYING and ERECTING a 40-inch DOUBLE-ACTING ENGINE and BOILERS—sinking the engine-shaft 20 fathoms below the adit, supplying and putting in the necessary pitwork, consisting of 2 10-inch plunger and drawing lifts, the erection of the engine-house and other buildings, flat-rods, capstan, shears, angle and balance-bobs, and every requisite to prove the lodes at the depth above-named; also to clear the old workings, open the levels, and take the mine on tribute for three months; the contractor to find every material and two sureties for the due performance of the said works. The committee do not pledge themselves to accept the lowest tender.

A specification, with working drawings, may be seen on application to Capt. Colliver, on the mine; or to Mr. C. S. Richardson, the engineer, 15, Old Broad-street, London.

N.B.—A person wishing to contract for any portion of the above separately, are requested to forward their tenders.

OILS.—BROTHERTON & CO. beg to call the attention of all parties EMPLOYING STEAM POWER to their PATENT PURIFIED OILS, for the economical working of STEAM-ENGINES and MACHINERY and BURNING IN LAMPS. The adoption of its use effects a saving of 25 per cent. over any other oil, and its properties are such as to greatly preserve machinery bearings.

BROTHERTON & CO.,

HUNGERFORD-WHARF, CHARING-CROSS, LONDON.

TO IRONMASTERS.—The Advertiser, who has been engaged in extensive iron-works in South Staffordshire for several years, as forge and mill manager, and who well understands the manufacture of bars, boiler-plates, rods, and other descriptions of iron, wishes to OBTAIN a situation in the same capacity. Satisfactory references can be given.—Apply at Mrs. Cooper's, news' office, Union-street, Birmingham.

TO NOBLEMEN, AND GENTLEMEN OF LANDED PROPERTY.—AS STEWARD OR LAND AGENT.—A Gentleman of active and persevering habits, having served his articles to a STEWARD, LAND AGENT, and SURVEYOR, is anxious to obtain a residual situation in the above capacity, or as an assistant to one. The advertiser is practically acquainted with the general management and improvement of estates, and has also had considerable experience as a CIVIL ENGINEER, having filled an appointment as a residual on a broad gauge line of railway, and subsequently as Manager on some extensive works in a mineral district. Any gentleman requiring a confidential Agent would find in the Advertiser a person to his wishes, as references and testimonials of the first class can be produced, and security, if required.

Address, "C. E. L.," *Mining Journal* office, 26, Fleet-street.

TO NOBLEMEN AND CAPITALISTS.—The Proprietors of an extensive MANUFACTURING CONCERN, working their own MINES and MINERALS, are disposed to treat with a Gentleman, who can command £40,000 or £50,000, to take a share in the same. It would be a very safe and lucrative investment, and such as is rarely met with.

Applications from principals, or their solicitors only, may be made to "A. C.," care of Messrs. Heather and Moger, solicitors, Paternoster-row, London.

TO CAPITALISTS, SHARE, AND MINING BROKERS.—WANTED, a PARTY, who will take in hand the formation of a Joint-stock Company, or otherwise, for the WORKING of a COLLIERY in YORKSHIRE, including beds of Ironstone for Hull, London, and foreign markets. A respectable party will be treated liberally.—Address, "G. L.," Box 71, Post-office, Rochdale, Lancashire.

PARTNERSHIP.—WANTED, by the Advertiser (a practical engineer), a GENTLEMAN with CAPITAL (£1500 to £2000), to JOIN in the CARRYING OUT of a NEW and VALUABLE INVENTION, which has been patented, and rigidly tested by competent authorities, the advertiser having works established, and an extensive connection.—For further particulars apply to Messrs. Hancock and Young, solicitors, 20, Tokenhouse-yard, City.

WANTED,—By an experienced practical MINER, who is thoroughly acquainted with Mining in all its branches, Geological and Mineralogical Formations, Assaying, &c., and who has for many years had the management of extensive mines in the United Kingdom, a similar SITUATION, either at home or abroad. Letters to be addressed "W. T."; or most unexceptionable references, as to character and ability, may be inspected at the *Mining Journal* office, 26, Fleet-street, London.

Dated February 3, 1850.

WANTED,—An Active Practical WORKING PITMAN, capable also of TIMBERING, for a COPPER MINE in IRELAND. Applications, with testimonials, stating terms, &c., to be addressed to Capt. N. Wilson, Messrs. Newton's, Warwick-square, London.

WANTED,—A new, or nearly new, HIGH-PRESSURE STEAM-ENGINE, on the most approved principle. Cylinder, 16, 18, or 20 in. diameter; stroke about 4 feet. Neither boiler nor connections of any kind are required. Apply to "B. Z.," *Mining Journal* office, Fleet-street, London.—Payment, cash.

STEAM-ENGINE (70-inch.), WITH TWO BOILERS.—FOR SALE, a very excellent 70-inch STEAM-ENGINE, with two boilers, first rod-piece, &c., &c., complete.—Apply to Mr. T. H. Edwards, Helston, Cornwall.

February 20, 1850.

STEAM-ENGINE FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, a 33-inch CYLINDER STEAM-ENGINE, 8 feet stroke, equal beam, with Steam Case, Brass Air Pump, Boiler and Connections, and Capstan and Shears.—Application to be made to Mr. F. Pryor, Bell Cottage, Redruth.—Jan. 2, 1850.

SILVER-LEAD MINE, yielding 300 Ounces of Silver to the Ton—Lease, 21 years; dues, 1-15th—adjoining another mine making large returns, TO BE SOLD CHEAP.—Full particulars and reports to be seen on application to Mr. Durrant, 58, Lombard-street, dealer in mining shares of all descriptions.

FIVE £3 SHARES in the EAST BIRCH TOR TIN MINE FOR SALE (£15 paid), price £12.—Application to Mr. T. E. Pittock, No, 15, Wrotham-road, Gravesend, Kent.

CAMBORNE CONSOLS COPPER MINES, CAMBORNE, CORNWALL.—OFFICES REMOVED to 22, NEW BRIDGE-STREET, BLACKFRIARS.—London, January, 1850. H. L. T. VON USTER, Secretary.

COURT GRANGE SILVER-LEAD MINES, CARDIGANSHIRE.—OFFICES REMOVED to No. 22, NEW BRIDGE-STREET, BLACKFRIARS.—London, January, 1850. H. L. T. VON USTER, Secretary.

KESWICK MINING COMPANY.—OFFICES REMOVED TO No. 76, CORNHILL.

London, February, 1850. JOHN WATSON, Secretary.

MR. JOHN BOYD (Agent for Messrs. Bolckow and Vaughan of the Middlesbrough and Witton-park Iron-works) SUPPLIES all descriptions of RAIL, BAR, and BOLT-IRON, Retorts, Pipes, Chairs, and general Castings; also Forgings and Chain Cables, and Anchors

OFFICE, 15, EAST INDIA CHAMBERS, LEADENHALL-STREET.

MR. RYE is a BUYER in Stray Park, Treviskey, South Tolgus, Condurrow, and United Mines.—For particulars, apply at his office, No. 77, Old Broad-street, City.

MR. C. S. RICHARDSON, CIVIL ENGINEER, LAND AND MINING SURVEYOR.

No. 15, OLD BROAD-STREET, LONDON.

JAMES LANE, MINING SHARE DEALER, 80, *OLD BROAD-STREET, LONDON.*

SHARES BOUGHT and SOLD in the following MINES:—

SOUTH CARADON (Copper).	
HENNOCK (Silver-Lead).	BRAY (Copper).
ASHBURTON UNITED.	TRELAWNY (Lead).
LLWYNMALEES (Lead).	MARY ANN (Lead).
BODMIN CONSOLS (Lead).	GUINAS (Lead).

Apply at No. 2, Royal Exchange-buildings (first floor); or 35, Craven-street, Strand.

ASTURIAN MINING COMPANY—IN LIQUIDATION. Notice is hereby given, that the time for RECEIVING TENDERS for the PURCHASE of the Company's PROPERTY, which has been announced for sale, is EXTENDED till the 18th of March next.

By order of the Board of Directors and Liquidators,

9, Austinfriars. Feb. 22, 1850. K. MACKENZIE, Secretary.

ASTURIAN MINING COMPANY—IN LIQUIDATION.—Notice is hereby given, that the MONTHLY BALANCE SHEET of the Company, to the 30th day of November last, prepared subject to the pending investigation, has been PRESENTED to the Political Chief of the Province of Oviedo, and the ABSTRACTS of the ACCOUNTS remain at the company's offices at Miers and in London for inspection.

By order of the Board,

9, Austinfriars, London, Feb. 22, 1850. K. MACKENZIE, Secretary.

EAST OF SCOTLAND MALLEABLE IRON COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of the EAST OF SCOTLAND MALLEABLE IRON COMPANY will be HELD within the Town House of Dunfermline upon Thursday, the 22d day of August next, 1850, at Twelve o'clock noon, for the purpose of considering a proposal to DISSOLVE the said COMPANY, and to SELL and realise the whole PROPERTY and ESTATE, and FUNDS and EFFECTS of the Company, and finally to wind-up the Company's affairs—all in terms of the 37th clause of the Contract of Copartnery of the said Company.

By order of the Directors,

JAMES INGLIS, Chairman.

Dunfermline, Feb. 6, 1850. JOHN DRYSDALE, Interim Secretary.

KINZIGTHAL MINING ASSOCIATION.—Notice is hereby given, that all SHARES upon which the CALL made December 15th, 1849, of 5s. per share, shall not be paid on or before the 21st March, 1850, will, in accordance with the statutes, become absolutely FORFEITED.

By order of the board, GEO. COPELAND CAPPER, Sec.

1, Adelaide-place, February 19, 1850.

WICKLOW COPPER MINE COMPANY.—The Dividend of FIVE POUNDS PER CENT., for the half-year ending September 1, 1849, will be PAID on and after the 1st day of March, 1850, at the offices of the company, Leicester Chambers, 43, Dame-street; and in London at the Banking-house of Messrs. Puget, Bainbridge, and Co.—Dublin, Feb. 21, 1850.

New Patents.

SPECIFICATIONS ENROLLED DURING THE PAST WEEK.

J. Young, of Manchester, manufacturing chemist: For improvements in the treatment of certain ores and other matters containing metals, and in obtaining products therefrom.

Claims.—1. A peculiar method of producing stannate of soda and stannate of potash.—2. Another method of producing the same.—3. A third method.—4. A method of producing the stannates of lime, barytes, and strontian.—5, 6, and 7. A mode of obtaining lead; from native carbonate of lead; from galena; from lead slag.—And 8. A mode of obtaining a compound of lead and antimony from slags.

Louis Lemaitre, late of Paris, but now of the Hôtel de L'Universe, Blackfriars, engineer: For improvements in the manufacture of ferrules for fixing the tubes of locomotive and other boilers.—The object of this invention is to manufacture ferrules by machinery instead of by hand. For this purpose a strip of iron or steel of the desired width is passed between a pair of grooved rollers, to form one edge thinner than the other; after which the strips are cut into lengths to form the ferrules, and bent into a circle by being caused to pass on a mandril underneath a roller. The mandril is supported in one end of a rotary shaft, the other being fitted with a winch-handle. The shaft has a groove cut in it longitudinally to receive a bent lever, carrying at its free end, just over the mandril, a piece of metal, which is caused to hold the strip of metal between it and the mandril, on motion being communicated to a second lever connected to the first. Above the mandril is a roller suspended in one end of a lever, which is depressed by hand, and made to bear against the strip of metal, so as to bend it into the required shape. This roughly-formed ferrule is (either when cold or raised to a welding heat, or heated to make it pliable) submitted to the action of a punch and die, whereby it will be finished, so that the exterior surface will not require turning in a lathe, and the edges welded or pressed together accordingly. When the edges are not be welded, they are made curved or angular, in order that, when subjected to an uneven force at the edges, they may support one another, and prevent the ferrule from being forced out of shape. The punch slides in a guide, and is worked by being attached to one end of a horizontal lever, the other end of which is connected to the piston-rod of a steam-engine. The die is in two portions, and is supported in a plate, which is made to slide up and down by being supported on pillars rising from an open frame, in which is a cam shaft worked by a hand-level, and the die closed or opened accordingly, to allow of the ferrule being punched in, and afterwards taken out.

Claims.—1. The mode of using a punch for forcing into a suitably-formed die a strip of metal which has been previously bent into the required shape, but not welded when the punch or die, or both of them, is made to work in guides.—2. The mode of operating as before, for welding, or giving the required form to strips of metal.—3. The manufacture of ferrules of strips of metal, not previously welded, when the junction of the sides are in a curved or angular line.—4. The manufacture of ferrules of strips of metal with one edge made thinner than the other, by the process of rolling, in order to give the desired form to the ferrules to facilitate their entrance into tubes.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

T. Whiffen, of Pig's Quay, Bridewell-precinct, accountant, for improvements in machinery for registering the delivery of goods.

A. V. Newton, of Chancery-lane, Middlesex, mechanical draughtsman, for improvements in separating and assorting solid materials or substances of different specific gravities. (A communication.)

J. Slack, of Manchester, Lancaster, manager, for certain improvements in the manufacture of textile goods or fabrics, and in machinery or apparatus connected therewith.

A. Hedlard, gentleman, of Paris, France, for certain improvements in propelling.

G. H. Palmer, of Westbourn Villas, Harrow-road, Middlesex, civil engineer, and J. Horton, Ætna Steam-engine Boiler and Gasometer Manufactory, Smethwick, near Birmingham, Stafford, for improvements in the arrangement and construction of gas-holders.

W. Cormack, of King-street, Dunston-road, Haggerstone, Middlesex, chemist, for improvements in purifying gas; also applicable in obtaining or separating certain products or materials from gas, water, and other similar fluids.

W. Mayo, of the firm of Mayo and Warmington, Silver-street, Wood-street, Cheapside, manufacturer, for improvements in connecting tubes and pipes, and other surfaces of glass and earthenware, and in connecting other matters with glass and earthenware.

J. Scoffern, of Essex-street, Middlesex, M.B., for improvements in the manufacture and refining of sugar, and in the treatment and use of matters obtained in such manufacture, and in the construction of valves used in such and other manufactures.

J. S. Woolrich, of Wednesbury, Stafford, chemist; J. J. Russell, of Handsworth, in the same county, and T. H. Russell, of Wednesbury, aforesaid, patent tube manufacturers, for improvements in obtaining cadmium and other metals and products from ores or matters containing them.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

S. Hiron, Birmingham, press for embossing and other purposes.
T. W. Cross, Leeds, barrel with grooved and tongued staves.
A. Mayer, Savage-gardens, Tower-hill, sawing instrument.
J. Sanders, Wood-street, Cheapside, an umbrella tent.—*Mechanics' Magazine.*

Mining Prospects.—We are happy in being enabled to state that the prospects of the mining interest in our own immediate locality, as well as in Cornwall generally, are most satisfactory and encouraging—the improved price of ores having placed many mines in a profitable position. We understand that within the past week a considerable number of shares have changed hands. Transactions to some extent have taken place in Botallack shares at advanced prices. Wheal Reeth continues in demand at enhanced quotations, the mine having considerably improved lately. Balleswidden shares have been much in request, but from the present prosperous condition of the mine, and the prospect of a good dividend at the next bi-monthly account, to be held on the 27th inst., holders do not seem disposed to sell, except at a considerable advance. At the meeting of Penzance Consols, last week, a large number of shares changed hands at a high premium. Business has also been done in the London market at high quotations; and from the present flourishing state of the mine, it is highly probable that she will soon be in a position to pay good dividends. We stated last week that, at the meeting of the adventurers on Monday, there was a profit of 105*l.* odd placed to the credit of the adventurers. We also learn that the mines in the neighbourhood of Redruth and Camborne are looking very promising, and that the adventurers are in high spirits. Numerous transactions have taken place in shares, at advanced prices.—*Penzance Journal.*

Copper Miners' Company.—In the Court of Common Pleas, on Wednesday, the 20th inst., the cause, Hoyle *v.* Enthoven, came on for hearing. It was an action brought by plaintiff, who was the governor of the Company of Copper Miners in England, to recover the interest upon seven bonds, or promissory notes, of the company, made payable to defendant on order, and by him indorsed to plaintiff. There were also counts for money lent, and to recover the principal. The notes were for 500*l.* each, bearing interest at 5 per cent., payable half-yearly.—Mr. Cunliffe deposed that he was on intimate terms with defendant, and had been frequently applied to by him to take some of the notes of the company, which he invariably refused; but in August, 1845, having 3500*l.* in his possession on behalf of plaintiff for investment, in an interview with defendant on subject of these notes, told him he had no objection to lend him that sum, upon having the bonds as collateral security. To this he consented; and, in witness's presence, inserted his own name in the body of the notes, and afterwards indorsed them. In cross-examination, witness acknowledged that, on the 20th August, 1845, defendant deposited in their house 20,000*l.*, at 2½ per cent. interest, payable at a week's notice. Defendant had also at the time a balance of from 7000*l.* to 10,000*l.* at Messrs. Barclay's.—Mr. Byles for defendant principally relied upon the improbability of defendant borrowing this money as a loan to himself at the moment when he had paid into the bank of the party advancing it the sum of 20,000*l.*—The judge having summed up, the jury found that the defendant took the money as a loan to himself, and became payable in default being made in payment of interest.—A verdict was, therefore, given for 3500*l.* and interest, together, 3893*l.* 15s.—Mr. Byles presented a bill of exceptions on the question that the notes were in the shape of agreements, and ought to have been stamped, and on other points.

ACCIDENTS.

Wigan.—On Tuesday week an explosion of fire-damp took place at the Lower Pairfroft Colliery, belonging to Messrs. Lancaster, when P. Gaskell, G. Broadhurst, J. Anders, and J. Anderton were killed, and two others were fearfully burned, but some hopes are entertained of their recovery. Three of the deceased, who were on a stage 50 yards from the top, were blown into the air, and again fell down the shaft, 400 yards, and killed on the spot. One man escaped by running through the fire, and, strange to say, his dog safely followed him.

Belper.—The stop-gear of an engine, which set in motion the machinery at Carr and Co.'s iron rolling mill, became disarranged one day last week, and a throttle-valve being obstructed, the whole force of the steam was driven upon the machinery, and the fly-wheel soon assumed a fearful speed. Vain attempts were made to stop the engine, and at length the fly-wheel, which weighed 50 tons, flew to pieces, and the segment of about 7 cwts. was carried over the adjoining houses a distance of 150 yards. Fortunately no lives were lost.

Wolverhampton.—Samuel Palmer, while in the act of drawing out a piece of red-hot iron from under a roller at the Shubbery Works, it accidentally caught the inside of his right thigh, piercing it to the depth of 5 or 6 inches, and producing extensive laceration of the muscles. Fortunately the principal artery was not penetrated, or death must have shortly ensued.—As Thomas Plant, employed at the works of Messrs. Dixon and Co., at Bough Hills, was in the act of stepping across the runner or gutter which conducts the melted iron from a furnace into the "beds," his right foot slipped into the hot iron, and it was severely burned.—*Wolverhampton Chronicle.*

Accident at Consitone Mines.—On Wednesday last, a miner, named W. Bowness, having prepared a blast and lighted the match, in one of these mines, was being drawn up by the chain to avoid the effects of the explosion, when the chain unfortunately broke, and he fell to a depth of 4 fms., fracturing his leg, and otherwise bruising himself. Notwithstanding the painful injuries and stunning shock of the fall, the poor fellow had the courage and presence of mind to drag himself forward and extinguish the match in time to prevent the explosion—otherwise the effects must have been fatal.—*Kendal Mercury.*

Swansea.—J. Thomas and D. Evans were suffocated in a coal-p it, the property of T. Kirkwood, Esq., of Llangiwicke. They had broken into an old working, and a quantity of carburetted-hydrogen rushing out, they feared an explosion, and run, without thinking, into a remote part, where they were killed by the carbonic acid.

Scilly.—Mr. Hugh Watts, farmer, of Old Town, had his leg broken in two places below the knee by the fall of a large mass of hard clay, while getting some from a quarry. He is getting on favourably.

Bolton.—The names of the five unfortunates who were killed by the explosion at Mr. John Fletcher's colliery, at Chowbent, recorded in our last number, were T. Green, aged 20; R. Seddon, aged 41; J. Wilde, aged 23; J. Worthington, aged 46; R. Sale, aged 29.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

This Day	Royal Botanic—Inner Circle, Regent's Park	8½ P.M.
Monday	Geographical—3, Waterloo-place	7 P.M.
	Medical—3, Bolt-court, Fleet-street	8 P.M.
Tuesday	Medical and Chirurgical—53, Berners-street	8½ P.M.
	Zoological—11, Hanover-square	9 P.M.
	Civil Engineers—25, Great George-street	8 P.M.
Wednesday	Geological—Somerset House	1 P.M.
Thursday	Royal—Somerset-house	8 P.M.
	Antiquaries—Somerset-house	8 P.M.
	Royal Society of Literature—4, St. Martin's-place	7 P.M.
	Numismatic—41, Tavistock-street, Covent-garden	3 P.M.
Friday	Royal Institution—Albermarle-street	8½ P.M.
	Botanical—20, Bedford-street, Covent-garden	8 P.M.
Saturday	Asiatic—5, New Burlington-street	2 P.M.
	Westminster Medical—17, Saville-row	8 P.M.

INSTITUTION OF CIVIL ENGINEERS.

February 19.—William Cubitt, Esq. (President), in the Chair.

The paper read was a "Description of the Iron Roof over the Railway Station, Lime-street, Liverpool," by Mr. Richard Turner. The area covered was described as being 374 feet in length, and 153 feet 6 inches in breadth, which was roofed over in one span. The roof consisted of a series of segmental girders, or principals, fixed at intervals of 26 feet 6 inches from centre to centre; these were supported, on one side, upon the walls of the offices, as far as they extended, and on the other upon cast-iron columns. From the end of the offices to the viaduct over Hotham-street, a distance of 60 feet 4 inches, the principals were carried upon a "box beam" of wrought-iron. The principals were trussed vertically, by a series of radiating struts, which were made to act upon them, by straining the tie-rods and diagonal braces; they were trussed laterally by purlins and by diagonal bracing, extending from the bottom of the radiating struts, to the top of the corresponding strut, in the adjoining girder; these braces were connected with linking plates by a bar of the same scantling, and also with the purlins already referred to. The girders were thus firmly knitted together, and a rigid framework formed, upon which the covering of galvanized corrugated iron and glass was laid.

The whole construction was minutely described, and the appendix contained an account of the experiments for testing the strength of the principals. These were made at the works of Messrs. Turner and Son, Dublin, under the direction of Mr. Locke, the engineer of the railway, when some great improvements in the construction were introduced at his suggestion. The discussion on this very interesting construction was announced for the meeting of Tuesday, Feb. 26, when the paper to be read would be "Observations on the Street Paving of the Metropolis, with an account of a peculiar system adopted at the London and North-Western Railway Station, Euston-square." By Mr. W. Taylor.

THE CONWAY AND MENAI TUBULAR BRIDGES.

Professor Cowper has delivered a lecture on this interesting subject at the Royal Institution. The professor commenced by briefly distinguishing between the real tubular structure of Stephenson and certain foreign bridges from which, as has been alleged, that principle was taken. Thus, the wooden bridge at Schaffhausen, which was destroyed by the French in 1790, and which was supposed to have suggested the tubular form, is proved by a model now in the museum of King's College to have been simply an arched bridge, having a roof as a shelter from rain. The same remark is equally applicable to a bridge at Wittengen and to wooden bridges in America, where the roadways are roofed. The professor then read a brief notice of various proposals and estimates, by which it appeared that the attention of the Legislature had been directed to the urgent necessity of a safe transit over the Straits of Menai since the year 1783. The most elaborate report was furnished by the late Mr. Rennie, who supplied several designs and estimates for bridges, either of cast-iron, or partly of cast-iron, and partly of stone. Prof. Cowper then proceeded to explain and to illustrate by models the principle of a bridge. He showed that the force exerted on the arch bridge is that of *compression* only—in the suspension bridge the force exerted is that of *extension* only; and that in the bow-and-string bridge both extension and compression are exerted. It was shown that the same forces are also exerted on the girder—viz.: extension on the under and compression on the upper side. This was demonstrated by the following experiment:—Wood, tin plate, and tin tubes, were successively inserted in a space of about 4 inches, purposely cut for that purpose in the middle of a girder, where it was also jointed. When the tin plate was inserted in the upper side, it bent under the pressure of a few pounds; but when rolled up into a tube it supported more than 100 lbs. Again, when the same piece of tin plate was fixed to the under side of the girder, where the force of extension was called into action, it would have required several hundred-weights to have torn it asunder. Mr. E. Hodgkinson's experiments on the best form of section for cast-iron girders were then adverted to. Small experimental girders, devised by that gentleman, were shown. They resemble the letter T. It was stated that the strength of this girder, when the flat side was uppermost, was to its strength when inverted, ⊥, as 1 to 3½. Other forms of section showed that the distribution of the same quantity of material would give differences in strength varying as 5½, 11, 15, 19.

It was then explained how wrought-iron tubes had been employed by Locke, Brunel, Fox, and Henderson, in the bow of bow-and-string bridges, and by Fairbairn in girders. The insufficiency of ordinary suspension bridges to support railway trains was adverted to; and Mr. Cowper explained a perfectly novel and highly scientific design of a railway suspension bridge, the invention of his son, Mr. E. A. Cowper. This bridge, from the principle of its construction, is called "The inverted arch bridge." An arch of an ordinary cast-iron bridge (like the Southwark Bridge) is secure in whatever position the load is placed, because the lines of thrust are contained within the arch of plates. Now, imagine a similar arch of wrought-iron plates to be inverted, and a roadway hung to it, then, wherever the load may be placed, the lines of strain will also be contained within the inverted arch of plates, and consequently there will be no deflection of the road. This very original invention is worthy the attention of engineers. Prof. Cowper then explained Mr. Stephenson's original proposal to build, without interrupting the navigation by scaffolding, a bridge of two cast-iron arches, the centre pier being placed on the Britannia rock. It was shown by a model how two half arches could be built on the opposite sides of a pier, each being tied to, and so balancing, the corresponding voussoir on the other side. Other conditions imposed by the Admiralty, but incompatible with the plan of the railway, induced Mr. Stephenson to adopt the plan of a vast tube. A section, made of rope, comprising the full size of the tube, was suspended from the ceiling of the theatre of the institution; it was 15 feet wide, and 30 feet high, and Prof. Cowper stated the length to be 460 feet (above twice the height of the Monument). After many experiments on cylindrical, elliptical, and other forms, Mr. Fairbairn adopted that of a rectangular tube, with rectangular cells at the top. Prof. Cowper illustrated, by experiment, the necessity of stiffness at the top of the tube, and demonstrated that this was obtained by the cellular form. The Menai tube is made with wrought-iron plates varying from ⅜ to ¾ of an inch in thickness, firmly rivetted together with T iron at the joints. The rectangular cells at the upper side are eight in number, and are 1 foot 9 inches square, and there are six similar rectangular cells at the bottom of the tube. The method of putting the tube together, and of raising it by hydraulic presses, was explained and exhibited by a model. The bridge consists of two lines of tubes, extending over two centre spans of 460 feet each, and two smaller spans of 230 feet each. These tubes, when in their places, were joined together by intermediate tubes of about 50 feet over the piers; thus, not only making the length of one entire tube to amount to 1524 feet, but, by the junction, adding considerably to the strength. The weight of the tubes is about 10,570 tons. The Conway tubular bridge has been in use for some time, and it is found that an ordinary train deflects the tube about ½ of an inch; that hot sunshine causes the heated side to bow out about 1 inch; that the strongest wind deflects the tube about 1 inch. It is intended to put sliding stays between the up-train and down-train tubes of the Britannia Bridge, so that they will support each other against the wind. The difference of temperature between summer and winter will expand the entire Britannia Bridge about 12 inches; this is provided for by fixing the middle of the tube on the Britannia pier, and allowing the ends to rest on 48 rollers, about 6 inches diameter in the abutments, the rails in those parts being allowed to slide by each other.—On the table were the works of Fairbairn and Dempsey; some plates of the tubular bridge by Mr. E. Clark, the resident engineer; and two models of the Conway and Britannia Bridges.

Brighton Extra-Mural Cemetery Company.—Sanitary improvements in all our large towns being now tolerably well established, as necessary both for the comfort and even existence of the population, every step in the right direction is gratifying to record, more particularly when, in addition to a great public good, a legitimate investment for the profitable employment of capital is established. Of such a nature, we take it, is a company just being established, for the construction of a cemetery at Brighton, whose population is now 60,000, in addition to which the annual visitors amount to 50,000. The registered number of deaths in 1849 was 1693, or 4·64 per day. To provide for this large and, of course, increasing mortality, there are at present the old church-yard, two small grounds attached to the old church, and one very small burial-place, all nearly full to repletion. To establish this desirable object, a large plot of suitable ground, within an easy distance of the town, has been selected, and a conditional contract made, the property in which is to be invested in trustees in perpetuity. The capital is 20,000*l.*, in 2000 shares, of 10*l.* each, each shareholder being protected by Deed of Settlement from liability beyond the amount subscribed for by him or her. Application for consecration of part of the ground will be made in due time to the bishop of the diocese. Offices are open both in London and Brighton.

COLONISATION OF CENTRAL AMERICA.

A meeting of debenture-holders in the Central American Commercial and Agricultural Company took place at the London Tavern, on Tuesday last, the 19th inst., for the purpose of receiving a report from the committee appointed at a general meeting, held on the 12th Dec. last, and for the adoption, or otherwise, of the measures therein proposed.—Daniel Mocatta, Esq. (the chairman), having briefly stated the objects of the meeting, read the notice convening it, and the report of the committee, which stated that their first object had been to ascertain what grounds they had for a reliance on an application to the Guatemalan Government; and a correspondence to that effect had been opened between one of the committee and a gentleman of high standing and influence in that country, from which correspondence it appeared that the right steps were being taken to obtain the great object they had in view. They should have been glad to have read this correspondence, but thought it at present most prudent, under circumstances, not to publish it, particularly as every debenture-holder, subscribing, might inspect it. They were aware of the importance of the support of the British Government, and anxious for it to assist them in arriving at the great object in view, and from communications on the subject, there was good reason to hope they should obtain their ends. The report closed by congratulating the debenture-holders on the present appearances of their prospects in the recovery of their lost position, and on the probability of the debentures again becoming valuable property.

The Chairman said, such was their position at present, and he would undertake to state his own impression, which was that a very trifling advancement of money would enable them to obtain most advantageous results. There had been 120,000*l.* sunk in this adventure, and his great object, and that of his colleagues, was for the debenture-holders to regain what they had lost, and what he believed to be within their reach. The causes of failure principally arose from the unsettled state of the country, famine, and the Guatemalan Government not being recognised by this country, which was not now the case; and the President, who could not then tell how long he should hold his seat, was now firmly established, and was anxious to forward their views to every extent in his power. He read an extract from some private correspondence, dated Guatemala, Oct. 14, 1849, from a party whom he said was no ordinary person in the country, which stated the writer's opinions to be, that it would be easy to obtain the originally stipulated grant of Vera Paz, or one of equal value, on the north side of the country, including the ruins of Coban, possessing fertile land, fine climate, and well situated for commerce, and advising that, if the necessary funds and instructions were remitted him, he would assist all in his power in furthering the company's views of colonisation and trade.

The Chairman then read two resolutions, which the committee recommended to the consideration of the meeting, which were—first, that in order to obtain a fund necessary to carry out the objects in view, a payment of 2s. 6d. per debenture be made on or before the 15th March next, and if it should be found necessary, a second instalment of 2s. 6d., one month's previous notice being given; and second, that all debenture-holders who subscribe shall be entitled to a proportionate participation in all the advantages which may accrue, that those who do not subscribe be excluded, and that subscribers present their debenture to Mr. N. Lindo, solicitor, 17, King's Arms-yard, and to receive a receipt for the payment made.

These resolutions were carried unanimously; the committee were re-appointed, and Capt. Gould, who first obtained the original stipulation for the grant, and Mr. Barrett, added to their number; and a vote of thanks having been passed to the chairman, the meeting separated.

EMIGRATION TO NATAL.

Natal, on the south-eastern coast of Africa, about 1000 miles beyond the Cape of Good Hope, has lately been brought into much notice, as a British colony highly advantageous to the emigrant, and where, by a trifling exertion of labour, he may realise for himself all the comforts of life. It must be, however, remembered, this locality is yet but little generally known, very few Europeans have yet settled there, and emigrants resolving to cast their lot in such a spot, must be prepared to sustain all the difficulties of solitude, hard labour, and plain food, which all pioneers in newly-peopled wilds have ever been subjected to. Speculators in land, taken from Government, are placarding extensively in London, and all large towns, describing the beauty and healthy nature of the climate, the richness of the soil, and numerous other advantages; but we would advise all intending emigrants to weigh well all the circumstances attending a settlement, before they part with all they have to depend upon for their exertions when they arrive on their land. We have seen several prospectuses on the subject. There is, however, one which, from the names of the parties designated as promoters, appears a *bonâ fide* undertaking. It is for the promotion of a company, under the title of the Natal Company, established for the purpose of promoting emigration, for the acquisition and sale of lands, the cultivation of cotton, &c. The capital to be established is 200,000*l.*, in 10,000 shares of 20*l.* each; and they have had selected a large block of land, the best undisposed of, which has been surveyed by the Colonial Government surveyor on behalf of the promoters.

The principal feature of this company, or in which will consist its main or primary profit, is, that 10*l. worth of land*—equal, at the Government price of 4s. per acre, to 50 acres—will be allowed to the company for each emigrant conveyed out; and the only condition being that the company shall give 20 acres to each emigrant, *a profit of* 30 *acres* will be secured to the company, being their land-stock, for sale, lease, cultivation, or other improvement. They will also employ their best energies for the cultivation of cotton and other produce, employing European and native labour, providing seeds, ploughs, harrows, &c., and taking the growth of cotton, tobacco, flax, and grain, at equitable rates. From the liberal nature of the arrangements named in the prospectus for the encouragement of emigration, it is highly probable, should a stream of population set in that direction, that the returns of the company will in a few years pay a good dividend. The cotton, even in its present roughly produced state, is of a tenacity and toughness of fibre hardly known elsewhere; tobacco, grain, grass, and fruit grow luxuriantly, and it is confidently stated that the climate is really healthy and free from those fatal diseases which have made other parts of South Africa the grave of Europeans. The provisional committee is in course of formation, and the company provisionally registered; and if we find it progressing favourably, shall return to the subject on a future occasion.

On the Basement Bed of the London Clay.—At the Geological Society, on the 23d January, a paper was read on this subject by J. Prestwich, jun., Esq. The position of the plastic clay formation, above the chalk and below the London clay, has been long well established. It has, however, been recently held doubtful how far the distinction between the London and plastic clay series can be maintained,—and some even regard the latter as merely subordinate beds of the former. The object of the paper is to show that the lower English tertiaries form several distinct subdivisions, each marked by different conditions,—indicating ancient hydrographical and palæontological changes of importance. For this purpose very numerous sections were described,—exhibiting the position and character of the lower part of the London clay. This deposit is a nearly homogeneous mass, several hundred feet thick, of tough clay, of a predominating brown colour. At its outcrop it invariably rests on a conglomerate bed of round flint pebbles, mixed with yellow, green, or ferruginous sands in variable proportions,—which the author names the basement bed of the London clay. Except where denuded on the chalk downs, this bed extends uninterruptedly from the Isle of Wight to Woodbridge, in Suffolk. The materials composing it seem to have been derived by denudation from the inferior tertiary strata. This bed contains 30 known and 8 or 10 still undescribed species of testacea. In the western part of the London district, the beds on which it rests contain no fossils; but at Woolwich, where it reposes on the fluviatile beds, six species of the estuary shells found in the latter also occur in the basement bed above, and four of them likewise in the freshwater series in the Isle of Wight. In the eastern district a few marine species are also introduced from the inferior tertiary beds. After deducting these, there remain 20 known species not found in the lower deposits, and constituting a distinct and well-marked group. Some of the species are very numerous and persistent through the whole range of the bed, but others die out towards the east; whence the author infers that the sea became shallower in that direction. In Essex and Suffolk, also, fossils are almost entirely wanting. From a table of the fossils it appeared that the species were chiefly those of the London clay. It was, therefore, concluded that this bed forms a well-marked geological horizon, dividing this formation from the older eocene deposits.

Liquid Glue and Paper Varnish without Size.—We have, on previous occasions, called attention to the liquid glue and water varnish, manufactured by Mr. Neuber, of New Oxford-street, and having lately had occasion to try their effects more particularly than before, we are but doing justice to the manufacturer and the public, by stating the results. The glue for cabinet and joiners' works is now being very generally used in the provinces as well as London, equally effectual as the common glue, as low in price, and without incurring the slightest deterioration, or loss by keeping—an unconquerable drawback on common glue exposed, as it is, in an open and continually heated vessel. The finer sort for china, glass, mineral specimens, shells, &c., has lately been much improved; it is now nearly colourless, more tenacious, and most successfully accomplishes the uniting broken relics of the above fragile wares. Care must be taken that no grease attaches to the part to be joined, as that prevents the effect of the uniting properties of the glue, and the directions should be carefully followed, as to warming the articles before and after adhesion. We have tried the varnish on some engravings with perfect success, and although not quite so colourless as mastic varnish, it is not a fourth of the price, or a quarter the trouble, and it answers effectually for all general purposes; but where the engraving is on thick woolly paper, we should still recommend a coat of size. We have varnished some new gilt mouldings, which it has rendered easily and safely washable, and we consider the two latter articles most admirable invenions for domestic use.

ON COPYRIGHT IN DESIGN.

In our last Number we briefly noticed a new publication on *Copyright in Design in Art and Manufacture*, by Mr. T. Turner, of the Middle Temple, and we now again refer to the subject as one of considerable importance to numerous parties employed in various departments of art. In pursuing the subject, the author states that one of the artists of the day (Hogarth), while too original in style and subject to be appreciated by the picture *connoisseurs* of the day, the public (the middle classes) all understood his fertile invention, his popular subjects, and his power of characteristic form. To this class, therefore, he turned for support, and, unlike others, painted solely for engraving; there were then only two printsellers in London, and Hogarth's works were pirated by etching and engraving all over the country. He called a meeting of professional brethren, and obtained the first protection Act of 1735, especially referring to etching and engraving. In 1767 the second Act was passed. In 1787 ornamental design became the subject of legal right; the protection was, however, only for two months, and applied to linen, cotton, calico, and muslin. In 1798 sculpture came under special recognition, but the most important bill, and that now under consideration, became law in 1842. It repeals all the previous designs' Acts, and enumerates the applications of the designs. For three years previous to the passing of this Act, the number of registered designs of every class were but 1423; while in the six months afterwards they amounted to 2934, showing how well the privilege was thought worth claiming. In this Act one point of difficulty arose, from the incessant attempt of inventors of utilities to obtain the privileges as well as their more fortunate ornamental brethren. This produced the Act of 1843, which was the first recognition of copyright in useful form, and the opportunity was taken of revising the machinery of registration, &c. The last law was the international Act of 1844. These laws have, upon the whole, worked well, and, no doubt, will, by their practical operation, supply their own best interpretation.

On coming to a consideration of the cost of patents, the author says, with much truth, that in England it is very capricious; the cost of a patent is enormous, that of books most burdensome; 11 copies were at one time required, which, when costly engravings were part of the work, fell heavily on the valuable books, however lightly on those of more numerous copies. A work by Nash, on the Brighton Pavilion, was published without any text, to avoid the cost of the 11 copies, which it was said would be 220 guineas. On the more politic and equitable working of the law in France, as in comparison with our own, it is said—

> The French were our examples in establishing any design rights at all; it would be well if we adopted their simple sensible arrangements for securing it. All kinds of design there are treated alike; all pay one price, and that price is not an arbitrary sum, but an annual tax. Two grounds only would justify our unequal taxation—variation in the value of the commodity (protection) sold, or variation in the cost of affording it. Now, as to the value of the protection, how is that to be estimated? One pattern brings in hundreds, another is a dead loss; one is designed by a Royal academician, another by an apprentice. A pattern in metal may sell to scores of purchasers, and an equally meritorious design in glass to thousands. Why should the first pay thrice what the second does? Objections of this kind will at once occur to those conversant with the various branches of art. Why not one uniform charge, and that one charge a minimum? The service rendered is precisely similar in all cases; it consists in simply receiving, recording, and preserving the claim of the owner. No guarantee is given, no assistance in maintaining his right. The Legislature professes great zeal for the encouragement of design. To be consistent, it ought to have maintained a registration machinery at its own expense. The money would have been spent for a similar object, and with more efficiency than in establishing schools of design; but, at all events, nothing more ought to have been required than what would maintain the office; and a fee of 1s. on each design would have done this.

The author proceeds to describe the practical application of the law applying to well-known cases, as explanatory of his views, and the volume closes with the several Acts of Parliament since, and inclusive of, the 8th George II., cap. 13. It is well printed, on good paper, and must prove a valuable companion to the lawyer, patentee, and inventor.

IMPROVEMENTS IN OBTAINING PAINTS OR PIGMENTS FROM MINERAL AND VEGETABLE SUBSTANCES.—Mr. T. J. Knowlys, of Heysham Tower, Lancaster, has secured a patent for an invention in the application and combination of mineral and vegetable products; also in obtaining products from mineral and vegetable substances, and in the generation and application of heat. The improvements sought to be secured under this patent relate chiefly to paints or pigments.—1. The patentee's first product is obtained by reducing silicate of manganese to powder, then grinding it up with oil. The result is a pigment of a light brown colour, which may be employed alone or mixed with peroxide of iron, oxide of zinc, or other colouring materials to give them tone and body. Or instead of the silicate of manganese, corundum, greystone, limestone, felspar, blue clay, Kimeridge coal, jet, anthracite, any of the varieties of pyrites of iron, iron ores, the residuum of copper, antimony and arsenical ores reduced to a friable state, and similar mineral substances may be employed. The grinding surfaces are made hollow and kept cold by the passage of cold water through them, and have a motion communicated to them similar to that employed in grinding glass.—2. To purify the crude oxides of zinc, which contain sulphur and other impurities, they are to be dissolved in sulphuric acid, and the solution allowed to stand until the impurities have settled, when the clear solution is decanted off, and a solution of carbonate of soda added to precipitate the zinc, which is dried and reconverted into oxide of zinc, when it is ready to be used as a paint or pigment. The sulphate solution is converted into the carbonate solution, and rendered again applicable. Hydrochloric, muriatic, or acetic acid, may be used instead of sulphuric acid. Or, instead of the preceding process, the crude oxide may be ground up with lime, or carbonate of lime, or carbonate of lime and magnesia combined.—3. It is proposed to employ the carbonaceous residuum from the manufacture of prussiates of soda and potash as a pigment, also as a manure, and deodorant. To render the residuum fit to be employed as a pigment, it is to be washed and ground up with oil. Or, muriatic acid is added to the residuum for the purpose of combining with the oxide of iron which it contains, and forming a salt of iron. It is then washed in water to carry off the saline and other impurities, and is ready for use. The resulting product is termed by the patentee "horn black," and may be employed as a black pigment, alone, or mixed with any of the substances before enumerated. The residuum may be used as a manure, either as first obtained, or when deprived of its iron; and may be applied in its natural state to the deodorising of noxious substances.—4. To clarify and bleach linseed oil, &c., it is proposed to cause it to flow, in finely divided streams, down a tower with glazed sides, and to encounter a current of air forced up in a contrary direction, so that it may be subjected to the action of light and air. The same apparatus, with the addition of steam-pipes, may be applied to the evaporation and concentration of syrups and sacharine solutions. Or, instead of steam, cold water may be caused to flow through the pipes, and the apparatus be then applied to cooling heated liquids.—5. The last improvement refers to certain steam-boiler furnaces, which were the subject of a former patent granted to Mr. Knowlys, and consists in causing the flues of two furnaces, placed on either side of the boiler, to descend, and then turn up and open into a tube, placed concentrically, and within the boiler, which leads to the chimney.—*Claims:* 1. The mode described of grinding colours.—2. The application of the various substances enumerated under the first head of the specification, either alone or combined with ordinary colouring materials, as paints or pigments.—3. The mode of purifying the crude oxides of zinc by the process above described.—4. The employment with the crude oxides of zinc of lime, of carbonate of lime, or carbonates of lime and manganese, combined, for the purpose of rendering them fit for being used with paints or pigments.—5. The application of the carbonaceous residuum obtained in the manufacture of prussiates of potash and soda, when treated as described, either alone or combined with other materials, as a paint or pigment.—6. The application of the said residuum either when in its natural state, or when deprived of its iron as a manure.—7. The application of this residuum, in its natural state, to the deodorising of noxious substances.—8. The employment of the apparatuses for the clarifying and bleaching linseed and other oils and fats, for evaporating and concentrating syrups and saccharine solutions, and for cooling liquids.—9. The use and application of a pyrometer attached to the subliming vessel.

LITERARY NOTICE.

Photogenic Manipulation (Part I.), *containing the Theory and Plain Instructions in the Art of Photography, or the Production of Pictures through the agency of Light.* By R. J. BINGHAM, late Chemical Assistant in the Laboratory of the London Institution. London: George Knight and Sons.

This little work, which has already gone through five editions, is now before the public in a sixth, with a full description of all the improvements and discoveries made in the delicate arts of calotype, fluorotype, ferrotype, chromotype, chrysotype, catallsotype, cyanotype, and anthotype. Among the discoveries made since the last edition of the work is a method of producing photographic pictures upon glass-plates, instead of plated copper ones—a process, judging from what has been done, which bids fair to rival the daguerrotype in its great delicacy and beauty of detail, while it possesses many of the advantages of the Talbotype process. Some time since Sir J. Herschel, in his experiments with photographic agents, found that glass-plates might be made use of with advantage for supporting the film of matter sensitive to light. By depositing a glass-plate in a solution of nitrate of silver and common salt, and allowing the chloride of silver thus formed to be slowly deposited, on placing this plate in the camera in the same manner as a daguerrotype plate, it is moderately sensitive, and darkens to a good black in a short time. When laid on a black ground, it has much the appearance of the latter, and still more when smoked at the back—the silvered portions reflecting most light, so that the character is changed from a negative to a positive picture. The author gives two separate improved processes for carrying out the work, is still making experiments, and hopes to be able before the summer weather arrives to publish a process equal in sensitiveness to the daguerrotype. We earnestly recommend this little volume to all interested in these elegant arts.

ON "FRANCOLITE," A SUPPOSED NEW MINERAL.

BY T. H. HENRY, ESQ., F.R.S.

Mr. Brooke some years since received from Mr. Nuttall some specimens of a mineral found at Wheal Franco, near Tavistock, Devon, which appeared to him, and to Mr. Brooke, to differ in external characters from all the substances with which they were acquainted, and it was consequently provisionally named Francolite. It consists of small masses of irregularly formed and aggregated crystals, apparently hexagonal prisms, of considerable lustre, and covering the matrix with a sort of mammillated surface It has lately been found in another mine in larger and purer specimens, and I have at Mr. Brooke's request analysed a part of one of these.

A small crystal, perfectly free from the matrix, was found by means of the blow-pipe to contain lime and phosphoric acid, and a portion reduced to powder and warmed with sulphuric acid corroded glass strongly. Iron and manganese were also detected; but a very minute trace of chlorine was found. I determined with this mineral to employ the method lately recommended by Prof. H. Rose for the quantitative separation of phosphoric acid from all bases but alumina, by means of nitric acid and metallic mercury. The crystals were reduced to powder, and freed from the matrix (quartz with copper pyrites) by treatment in a stoppered bottle with very dilute nitric acid in the cold (one part of strong acid to nineteen of water), in which the mineral was perfectly soluble. The solution was evaporated to dryness with metallic mercury in a platinum dish heated by steam (the fluoride of calcium is hereby decomposed and the fluorine dissipated), and the remainder of the process conducted scrupulously according to the directions given by Rose (Poggendorff's *Annalen*, March 1849). The iron and manganese were separated from the lime by ammonia after the addition of bromine. The separation of phosphoric acid was complete; not a trace could be discovered with the basis by means of molybdate of ammonia, nor could a trace of lime be discovered by treating the $2MgO, PO^5$ with sulphuric acid, evaporating and dissolving in alcohol.

The results obtained in two analysis from crystals from different parts of the specimen were in 100 parts,—

Lime	53·38	53·81
Oxides of iron and manganese	2·96	3·22
Phosphoric acid	41·34	41·80
Fluorine and loss	2·32	2·17
	100·00	100·00

This composition corresponds very nearly to that of fluor apatite, $CaFl + 3(3CaO, PO^5)$, in which the lime is partially replaced by the protoxides of iron and manganese. This composition would give per cent. (see Rammelsberg's *Handwörterbuch der Mineralogie*, p. 97),—

Lime	55·88
Phosphoric acid	42·02
Hydrofluoric acid	2·10=100·00

And these analyses of Francolite confirm, by the direct estimation of the PO^5 by an accurate method, the results obtained by Gustave Rose, in an elaborate investigation of several varieties of apatite from various localities, published many years ago, in which the phosphoric acid was estimated from the loss.—*Philosophical Magazine.*

TIN BOUNDS IN UNY LELANT AND ST. IVES.—In the cause, Bolton *v.* Higgs, which was tried in equity, Mr. Roberts and Mr. Hockin appeared for the plaintiff, Mr. Stokes and Mr. Roscorla for defendant. Plaintiff was Mr. Thomas Wally Bolton, the assignee of Mr. Thomas Ellis, insolvent debtor; and defendant was Mr. Samuel Higgs, of Penzance, merchant, and purser of Providence Mines, in the parish of St. Ives. The petition set out that there were certain tin bounds in the parishes of Uny Lelant and St. Ives; that Thomas Ellis, prior to his insolvency, was part proprietor of those tin bounds—namely, to the extent of one-half of Trelyon bounds, one-half of Trelyon middle bounds, and 13-48ths and 1-42d of Carninuy great and little bounds; that being so interested, he set the same, with other proprietors, on the 26th of March, 1836, to defendant for 21 years, who entered and worked, but had not set out the dues which were covenanted to be paid—namely, 1-36th of the tin and tin ore raised; that since the date of the setting, Thomas Ellis had become an insolvent debtor, and that Trevenen James was appointed his assignee on the 26th of November, 1844, but wishing to retire, the petitioner was appointed assignee in his place on the 19th of December, 1848. The petition alleged that an account had been demanded and refused by defendant. The answer denied the entry or working any part, except the Carninny bounds; but pleaded the dues had for years been remitted, and since that period had been fully paid. Mr. Roberts said the Trelyon bounds had been worked as Wheal Venture, and he should show there were dues owing by defendant to plaintiff. The license to defendant to work in March, 1836, was put in; also a letter from Mr. Higgs to Mr. Ellis, dated January 24, 1839, showing that he must have received dues from Wheal Venture. Witnesses were called, who proved the above facts. Mr. Stokes, for defendant, contended that as in the license there was no covenant on the part of Mr. Higgs, he could work or not, as he thought fit, and it was not shown he had worked. The evidence was so extremely vague, as to situation of bounds and in other respects, that he submitted no question could arise on it. As to the most important part of the case, the Carninny bounds, witnesses were examined and letters put in evidence, from which it appeared the whole claims amounted to 97*l.* 17s. 3d., and credit was given for 11*l.* 1s. In opposition to the claim, it was shown that, in 1841, the Providence Mines were unprofitable; 10,000*l.* had been laid out, in consequence of which Mr. Ellis agreed to remit the dues during pleasure, and the whole of such remitted dues were sunk in working the sett The remission had continued until April, 1848, from which time the mine had become profitable, and the bound dues had been demanded and paid. Mr. Roberts having replied for plaintiff, the Vice-Warden gave judgment. With regard to Trelyon, an account should be taken by the registrar of what was due from defendant in respect of ores raised, as the circumstances under which they were raised made it defendant's act; and for Carninny, he decreed for an account of the dues not remitted in April, 1843, due to Mr. Ellis then, and now to his assignee; and for an account of the dues called for in April, 1848, and accruing up to the date of the petition; on which account defendant would be allowed all sums shown to have been paid by him.

WHEAL HENRY.—At the Court of the Vice-Warden of the Stannaries, an interesting question arose in the cause Tippet *v.* Craddock and Hernaman. A petition was presented by Mr. Tippet, the purser, in which he prayed for the recovery of costs alleged to be due on shares in the mine. Mr. Stokes, for defendants, moved for a rule *nisi* to show cause why the petition should not be taken off the file for irregularity. The principal witness was Mr. Francis Passingham, who stated that on the 22d December he had received what purported to be a copy of the original petition and summons, but which, on examination, did not correspond. In the petition it was stated that Wheal Henry had been worked since 1842, in the copy since 1849, a difference of seven years; also, that Wm. Craddock, of Truro, auctioneer, held shares from the 30th December. 1845, while in the copy it was the 30th September. A copy had been served on each defendant, and both were wrong. Mr. Stokes also rested his motion that the petition be taken off the file on the ground of misjoinder: William Craddock was declared on the face of the petition to have become a bankrupt, and defendant Hernaman was the official assignee under the bankruptcy. He, therefore, submitted that Craddock was misjoined as a defendant—for at the time the petition was filed he had nothing to do with the matter, the object of making him a defendant being to prevent him from giving evidence at the trial in favour of the official assignee. The Vice-Warden said the defence of a misjoinder should not be heard on motion, but at the trial, unless Mr. Hockin would agree that it should be taken on motion,—to which, however, Mr. Hockin refused his assent. The Vice-Warden then granted a rule *nisi* on the other ground—to show cause why there should not be a re-service of an accurate copy of the petition. On the question as to the misjoinder, the arguments extended to a great length, and were principally on points of law, and quotations from cases in point. Mr. Stokes contended that the bankrupt ought not to have been made a defendant, in conjunction with his assignee. The bankrupt's effects having passed to the assignee, he had no legal or other interest of moment in the property, and the assignee ought alone to have been the defendant; and another ground was, that the bankrupt might be a material witness for the assignee at the hearing. Mr. Hockin and Mr. Roberts, for plaintiff, contended that defendants, having joined issue on the facts, as to whether Craddock had or had not an interest, it was not competent in this summary way to ask for the dismissal of the petition against Craddock, and certainly not against Hernaman. The Vice-Warden, in giving judgment, said that, with regard to the clerical errors, if plaintiff succeeded at the hearing, he could not charge them in the costs, and recommended parties practicing to notice this, to silence future objections, which, though unimportant, might lead to difficulty. As to the objection against the bankrupt being made a defendant, he thought it was good, and the petition must be dismissed as against the bankrupt, and would be heard as against the assignee.

AN OBSTINATE SKIN DISEASE CURED BY HOLLOWAY'S OINTMENT AND PILLS.—Mr. Fishing, late of Broad-street, Bath, suffered for many years from a severe scorbutic disease, which affected his hands to such a degree that for months together he was unable to work at his business. He consulted nearly all the faculty of the place, and for a long time used the Bath waters, which are so celebrated for the cure of cutaneous disorders, but the virulence of the complaint remained unabated. He then tried Holloway's Ointment and Pills, which have so effectually cured him, that he has had no return of the malady for more than two years.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

FOREIGN INTELLIGENCE.

SOUTH AUSTRALIA.—By way of Singapore we have received Adelaide journals to the beginning of November. The revenue for the quarter, ending Sept. 30th, is set down at 42,013*l.* receipts, and 39,302*l.* for expenditure, exhibiting a steady and healthful progress of the colony, as compared with the corresponding quarter of previous years, as under—

1845	Quarterly (general) revenue for September			£ 893
1846	"	"		11,328
1847	"	"		14,055
1848	"	"		23,836
1849	"	"		24,401

On October 17th, the directors of the far-famed Burra Burra Mine held their ninth half-yearly meeting—a report of the proceedings at which we were enabled to give in our Journal of the 9th inst.

PRODUCT OF GOLD IN CALIFORNIA.—The treasurer of the United States Mint has furnished a return of the amount of Californian gold sent into the parent establishment at Philadelphia, and the branch at New Orleans. The first Californian gold sent to the United States Mint was in Dec., 1848, by a merchant of Boston, which was followed by a small amount in the same month by Governor Marcy, the then Secretary of War, from General Mason, at California, who had received the same at San Francisco for duties. The whole amount produced only $44,177 of coined money.

The following table will show the deposits of gold at the Mint of the United States, Philadelphia, and at the branch at New Orleans, from the first receipt in Dec., 1848, up to the present time, a period of about 14 months:—

At United States Mint, Philadelphia, in 1848		$ 44,177
"	" 1849	5,481,439
"	part of January, 1850	850,000
Total		$6,375,616
To which add—		
At the Branch Mint, New Orleans, in 1849		$ 666,080
"	part of January, 1850	50,000
		$716,080
Making a total of		$ 7,091,626

There were coined at the Mint, Philadelphia, in 1849, 1,428,543 pieces of gold, valued at $7,948,332; silver, $3,802,600 pieces, $922,950; copper, 4,218,364 pieces, valued at $41,994.

"News has been received by the *Empire City* from California to Jan. 1. The mining operations have been suspended, in consequence of snow and rains. A tremendous conflagration had taken place at San Francisco, on the 24th Dec., destroying a large portion, probably one-half, of the city. The loss is estimated at from $1,500,000 to $2,000,000. The *Empire City* brought on manifest $1,108,647 in gold dust, supposed about $1,000,000, in hands of passengers. In the vaults of the British company at Panama were about $800,000 to $1,000,000 in specie from the mines."

A private letter says—"The statements regarding the extensive vein of gold which had been discovered by Colonel Fremont in the neighbourhood of Monterey are said to be fully confirmed. Colonel Fremont got possession of the district before divulging the secret, and he has now 200 Indians at work. Machinery for crushing will greatly increase the produce, and the yield is represented to be in the extraordinary proportion of 1 oz. of gold to about 23 lbs. of rock. That there is an abundance of quicksilver, and also of silver, especially in Lower California, is likewise held to be beyond doubt; but the gold has hitherto proved more attractive, and as quicksilver is largely used in connection with existing operations, and is likely to be still more in demand through the discovery of Colonel Fremont's mine, while at the same time its extraction requires machinery, a rise rather than a fall in the price of this mineral seemed, in the first instance, to be anticipated. The works at Mr. Forbes' mine were understood to be waiting the arrival of machinery from England."

SPAIN.—The province of Guadalajara promises to become a new California Independent of a number of silver mines, one of the richest quicksilver mines yet known has been discovered by chance in the district of Bujalaso, situated about 12 leagues from Madrid. Letters from Santander state that 5317 shares in the projected railway company, for connecting that town with the canal of Castile has been disposed of. These shares represent a sum of 10,880,000 rls. To give you an idea of the wonderful progress made in this country in the construction of locomotives, I can state positively that General Manuel de Concha was conveyed a few days since from Barcelona to Mataro by railroad, a distance of nearly 17 English miles, in the short space of 12 minutes.

A letter, dated Madrid, Feb. 14, says—"The journals are making a good deal of a quicksilver mine, said to have been discovered in the province of Guadalajara, and which has attracted a good many persons from Madrid, who have commenced exploring in different directions. It appears that some globules of native quicksilver were met with at first, which has probably led to exaggerated expectations. I do not hear that it has yet been met with in the state of cinnabar, in which it exists at the Almaden Mines, or in any quantity. It is said that nearly 400 persons are employed in the present explorations."

CHARITABLE INSTITUTION FOR CORNISHMEN AND THEIR WIDOWS.—A feeling having arisen in the minds of several gentlemen connected with the county of Cornwall, that considering almost every other county in England possesses a society in London where her deserving poor could be relieved, and that remarkable as Cornishmen were for their hospitality at home, it was a reproach that his county had no such society, a meeting was held on the 25th of January last, to consider the subject. At this meeting it was resolved that such a society be formed, to be called THE CORNISH BENEVOLENT INSTITUTION, the objects being to relieve distressed honest Cornishmen and their widows in old age and infirmity, by permanent pensions, and also to relieve casual distress in urgent cases, providing they reside in the metropolis, or within the bills of mortality. We are happy to see that, from the names already down as subscribers, there is a probability of carrying out the proposal, of which the proposers are very sanguine; and, when we consider the large wealth realised in London by the labour of the Cornish miner, we hope to see such a spirit of liberality and kindness of feeling evinced by its recipients, which will speedily advance the undertaking to a successful issue.

ENGLISH AND CAMBRIAN ASSURANCE SOCIETY.—We have so often alluded to the immense advantages (moral and social) which result to a civilised community through the extension of life assurance, and its real merits are becoming so much more generally appreciated than formerly, that we shall not again enlarge upon them here, our present object being to notice a newly-established society under the above title, formed, as stated in the prospectus, with a view of rendering increased facilities for the transaction of fire and life assurance, and other collateral business, of great practical utility to all classes of the community, and to supply some of the deficiencies of existing offices. It is based on the mixed mutual and proprietary principle, the capital being fixed at 150,000*l.*, a sum deemed amply sufficient for the security of the assured, and sufficiently low as not to interfere with their personal interests. One great feature in the fire department, and which we have often wondered has not been long ere this adopted by other offices, is that policies will be granted on the dwellings, wearing apparel, and furniture of the artizan, labourer, clerk, shopman, domestic and other servants, for so low a sum as 10*l.*, for which a special table of premiums have been prepared. This class of insurers, we have no doubt, will bring a large amount of business to this society, and effect a great amount of public good when those lamentable occurrences by fire take place, by which many are at once deprived of their all, and who now, by a trifling payment, may rest secure, under all ordinary circumstances, that they will at least have the means to replace the loss. We have not space to follow the details of a long prospectus, which to us appears to embody all the best features of the system. Profits are periodically divisible proportionally among proprietors and assured, and the capital is divided into 12,000 shares, of 12*l.* 10s. each

SUPPLY OF WATER FOR LONDON.—The Bala Lake, in Merionethshire, is, o all others, the most effective as a source for the supply of our immense population. The lake comprises 1200 acres of water of the purest quality; and might be increased in quantity *ad libitum*, by embankments of easy construction and moderate cost in the rocky gorges of the mountainous region around the lake. The lake is 1000 ft. above the sea; and, therefore, 600 ft. above Hampstead-heath, which should be the reservoir for London and its neighbourhood. In order to carry this measure out, London should not be the first object of the promoters. I conceive that the nearest railway to the spot where the water from the lake could be brought with all its force, should be the line of transit—say, Oswestry—to a central position for the supply of Manchester, Liverpool, and other large manufacturing towns in that neighbourhood; London should follow. The railway thence to London should be the line of transit. Pipes of great strength, and 4 ft. in diameter, could be sunk in the ground 6 ft. (to avoid frost) alongside the railway. The land is purchased, legal and engineering difficulties got over, and nothing remains to make railway companies too happy to receive a rent for laying down the pipes for the supply of London, and of every town requiring water on the line, but to satisfy the public of the impossibility of accident from the pressure of water from so great a height. Resting places might be selected in the Derbyshire and Buckinghamshire hills, where the water might be made to recover its original level, minus the fall it has lost in the passage; thus lessening the complication of pressures on different gradients, lessening the chance of accidents, and facilitating the supply in detail.—F. W.: *Reigate, Feb.* 16.—*Times.*

SPECIE.—The vessel *Octavia*, arrived from Islay and Arica, has brought from the latter place 8231 bags of copper ore, and 3332 bars of copper, consigned to an eminent firm in the metropolis; the *Nile*, from Calcutta and the Cape, has brought three boxes of specie from the latter place, similarly consigned; and the ship *Victory*, from Port Phillip and Sydney, has brought from the latter place two boxes of gold-dust, individually addressed to firms in London, and also two boxes of gold-dust consigned to order.

Proceedings of Public Companies.

BANK OF AUSTRALASIA.

A special meeting of the proprietors of this company took place at the Bank, in Austinfriars, on Monday, the 18th instant, for the purpose of taking into consideration the requisition of several proprietors, the object of which was the appointment of auditors.

Sir GEORGE CARROLL, Knt., in the chair.

Mr. MILLIKEN (the secretary) read the notice convening the meeting.

Mr. NEWSOM then rose to propose several resolutions, having for their object the appointment of two auditors to examine the accounts of the company. He went into the merits of the question at some length, and hoped the directors, of whose honour and integrity he had the highest opinion, would not oppose so wholesome a change in their laws as that now proposed by himself and other proprietors.

Mr. J. WILSON seconded the motion, and argued in favour of the appointment of auditors, the want of which had led to such a lamentable loss on the part of the Newcastle Bank proprietors. (Hear, hear.)

Mr. TILSON proposed, as an amendment, "That the question be not put." He thought the proposal would be nothing less than a reflection on the integrity of their board of directors. (Hear, hear.) As to the loss of the Newcastle Bank, that could not have been prevented by the auditors; the fault was the selection of improper parties as directors in the first instance. The loss arose from the squandering of 100,000*l.* on a colliery, in place of 20,000*l.* or 30,000*l.* He hoped the meeting would oppose the motion unanimously.

The amendment having been seconded, Mr. MEEK (a director) was much obliged to Mr. Wilson for his favourable opinion of himself and the board with which he acted. It was his decided opinion that the appointment of auditors was not advantageous to a bank like this; but would, on the contrary, be prejudicial to its interests. (Hear, hear.) It might be very well for a railway company to demand auditors, when the dealings were only between the directors and the proprietors; but, in the case of a bank, it was very essential to have the appointment of auditors. In banks, they [illegible] that the business was not only between the directors and proprietors, but between the directors and customers also, in whose case secrecy was essential. In fact, the principle was so well admitted, that, at the beginning of every year, it was the custom of this board to impress on the clerks the obligations they were under as to secrecy. He knew a company in which the auditors had interfered to such an extent as to render the directors a mere staff of clerks. In conclusion, and with every feeling of respect for the honesty of purpose of those proprietors who advocated the introduction of auditors, he must beg to oppose it, as the unanimous feeling of the board of directors. (Hear, hear.)—After a similar expression of feeling from other directors, the CHAIRMAN put the amendment to the meeting—namely, "that the question be not put"—which was carried by a large majority, the original resolutions being, therefore, lost.—A vote of thanks was then passed to the chairman and directors, when the meeting separated.

SOUTHERN WHALE-FISHERY COMPANY.

The half-yearly meeting of this company took place at the London Tavern, on Thursday, the 21st instant,

The Right Hon. the Earl of HARDWICKE, R.N., in the chair,

Who proceeded to address the meeting on the great importance of the company, both on commercial and national grounds, in which they were embarked.

Mr. PRESTON (the secretary) read the report, which stated that the directors had dispatched three whaling ships, which would probably arrive at their destination by the end of last December. These vessels had carried out a sufficient body of settlers for the fisheries ashore—many of whom had been accompanied by their wives and families. Two more whaling ships were built by the company, and were on the point of sailing; three others were in the course of construction, and would be ready to sail in a few months. The directors intended, as soon as possible, to increase the number to 10 or 12, including those that had sailed. The prospects of the company remained the same as when it was originally formed—the quantity of oil still being small, and the price was much increasing from that circumstance.

The noble CHAIRMAN moved the adoption of the report.—Admiral Sir GEO. SEYMOUR seconded the motion, and said, that he had often remarked, when in command of the British squadron in the Pacific, how important the whaling trade in that quarter would be to British commerce. He had seen plenty of American, and regretted to find so few British ships engaged in so promising a trade. (Hear, hear.)—The report was then adopted.

Statements were read in support of the plan adopted by the company, and pursued by the Americans themselves—that was of employing in the fisheries only vessels of small tonnage; and the accounts from the Australian and New Zealand papers showed that the fisheries in their vicinity are very productive.

The retiring directors were re-elected, and an auditor was appointed.—After a vote of thanks to the noble lord and directors, the meeting separated.

THE ELECTRIC TELEGRAPH COMPANY.—On Tuesday the select committee on standing orders decided that the standing orders might be dispensed with, in favour of this company, who applied for leave to deposit a petition for a money bill. The petition, which is signed by three-fourths of the proprietors, states that the capital of the company was orignally 600,000*l.*, in 6000 shares of 100*l.* each; that 50*l.* per share has already been paid up, and that no more capital is required at present. They are, therefore, desirous of dividing each 50*l.* per share, so paid up, into two 22*l.* shares, and to be considered as paid up, reserving power to raise the remaining 300,000*l.* of unpaid-up capital as occasion may require.

COMPRESSED-AIR-ENGINE COMPANY.—The winding-up of this important company's affairs is now nearly brought to a close by the settlement last week of the list of contributories, by Master Sir W. Horne. The subscriptions in promotion of the measure amounted to 8554*l.* The expenditure was 5205*l.*, and the balance in hand up to the commencement of the proceedings for winding-up, 3349*l.*; out of which sum the projectors are to receive 500*l* each, in consideration of abandoning their claim. The other outstanding liabilities will, it is expected, absorb the rest of the balance in hand. Measures are to be taken against those who did not pay the deposit, the proceeds of which will be divided among those who did. This will be one of the few cases in which no call or contribution is likely to be made upon the shareholders.

PORT OF LONDON SHIPOWNERS' LOAN AND ASSURANCE COMPANY.—On Monday, Master Tinney appointed Mr. Hutton official manager, to investigate and wind up the affairs of this undertaking, started by Mr. Augustus Collingridge, in 1847, to insure against "the perils of the seas, fire, rovers, reprisals, and other marine risks," the ships and vessels of the shareholders, with a capital of 50,000*l.*, in 500 shares, of 100*l.* each. The preliminary deposit was 2*s.* 6*d.* per share. Various policies, the claims in respect of which are matters in dispute, were granted, and in 1849 the directors, finding it inexpedient, from nonpayment by the shareholders, to continue the undertaking, transferred the same to the Sea, Fire, Life Assurance, who undertook to indemnify the Port of London from all risk and loss in respect of policies representing contingent claims against the company.

TRING, READING, AND BASINGSTOKE RAILWAY.—On Saturday, the further consideration of this company's affairs came before Master Richards, with reference to a third list of contributories brought in by the official manager, Mr. Wryghte, consisting of the managing directors of the company, to each of whom an allotment of 200 shares was made, and 150 more in their capacity of promoters of the measure. Only one of the directors took up these shares, and the object of the proceeding is to compel the others to take up theirs, and pay the deposit of 5*l.* 5*s.* thereon, which, subject to a deduction of 10*s.*, will be divided among the shareholders, who will then, should this and a further sum of 6200*l.*, ordered by the master to be paid, be recovered, be in the receipt of 2*l.* 10*s.* per share, as a return out of the 5*l.* 5*s.* which they originally paid as a deposit.

GLOUCESTER, ABERYSTWITH, AND CENTRAL WALES.—On Wednesday, Master Tinney intimated his intention of enforcing his order on the solicitors for the production of the books and papers of this company, without which the affairs cannot be wound up.

LONDON AND BIRMINGHAM EXTENSION.—On Wednesday, the affairs of this undertaking came before Master Blount. About 35,000*l.* was received by the directors as deposit, the greater part of which was expended in parliamentary and engineering expenses. The existing liabilities remaining to be defrayed by the shareholders amount to 10,000*l.* There were upwards of 400 shareholders on the list of contributories, and the Master fixed on the list as liable all those who paid the deposit and signed the deed, reserving for argument and consideration the cases of those who appeared, and who object on various grounds to be held liable at all.

DUBLIN AND DROGHEDA RAILWAY.—The Navan branch of this railway is now open for public traffic. There are 17½ miles of the line now complete and it is intended to extend to Kells, 10 miles further, which can be completed, it is calculated, for about 4000*l.* per mile. The principal feature of interest connected with the line is the magnificent bridge spanning the River Boyne, near its confluence with the Blackwater. It is of seven arches, each 50 ft. span, built of rough hewn limestone in the most permanent manner, and presents a noble feature in the landscape of the place. The distance from Drogheda to Navan is easily accomplished in half-an-hour, so that from Dublin to Navan, being nearly 50 miles, will not occupy more than two hours, including stops.

NEWRY AND ENNISKILLEN.—Operations have been renewed with spirit under Mr. Dargan. The line will be completed to Portadown in about 12 months.

Original Correspondence.

NAMES OF MINES.

SIR,—A letter, with Mr. Symons's name, makes some remarks, in you last Journal, about an alteration in the names of mines. As the North Roskear Mine is particularly referred to, permit me to observe, that the parties purchasing that property thought it advisable to alter the name of the mine, and which being 1½ mile in extent, they resolved to make two mines of the five leases.

It is by no means new to alter the names of mines when passed into other hands; for instance—

Tywarnhayle Mine,	was formerly	called	United Hills.
Wheal Tremayne	,,	,,	Wheal Providence.
Carn Brea	,,	,,	Wheal Fanny.
Lanarth Consols	,,	,,	Penstruthal.
Pengilly Tin	,,	,,	Nancegollan.
Tamar Consols	,,	,,	Bealaston Mine.
East Buller	,,	,,	Wheal Gallah.

And many others I could mention. Whether "Pendarves Consols" is too near a name to "Pendarves and St. Aubyn" (a mine new to me), I know not. By-the-bye, I hope there will be room enough in the market for both mines, whatever mineral their produce may be—excepting mundic. The greatest inconvenience I perceive amounts to nought.

Pendarves Consols, Feb. 19. HENRY RICHARDS.

WHEAL GROSE MINE.

SIR,—In your valuable Journal of the 16th inst., I notice my report of this mine, in which I find not only an *unauthorised* addition to that really given by me, but a *diminution* of it as well. In the first place, I beg to disclaim any knowledge of that portion of a sentence contained in the 13th line, and reads as follows—viz.: "The lode being 3 ft. 6 in. wide, with real good work throughout;" and, in the next place, I would observe that the latter part of this report, instead of reading "she is contiguous to Tregorden Mine, and on the same lodes," should be "and is probably on the same lodes;" for, though the run of the lodes, as well as the situation of the two mines, is such as leads one to suppose it is the case, yet, until a further development be made, it would be impossible for me to determine it is so. W. H. T. STEPHENS.

Wadebridge, Cornwall, Feb. 19.

[The report in our last Journal, referred to by Mr. Stephens, was inserted *verbatim* as furnished us; and we can only say it reflects little credit on parties connected with the management of a mine thus to garble an impartial report of an experienced miner, and compromise his character for honesty and cautiousness in his profession. The alteration in the few words alluded to completely inverts the intention of the writer, and, of course, is done to give the mine a character it does not yet deserve, and mislead the public. Such conduct, however, is, in the end, sure to meet its due fate, as regards the mine concerned; but the mischief it does to others is to be regretted, for it is by such practices that people are rendered fearful, even when legitimate undertakings are concerned.]

WHEAL ANDERTON.

SIR,—Having seen two paragraphs in your "Notices to Correspondents," in the Journals of the 9th and 16th inst., signed "Shareholder," and "A. Linnet," respecting the management of Wheal Anderton Mine, and whose object is apparent, from the circumstance of a meeting having been called, for the purpose of declaring forfeited such shares as are in arrear of calls long overdue, and agreed to at a meeting held some months since, I have to express my obligations to you for the appropriate remarks which accompanied the same. I do not think it fair, on the part of your correspondents, to hide themselves behind the screen which they falsely think your publication would afford them. Let either of your correspondents make his attack in person, if the one or other be, *de facto*, a shareholder, or adventurer, and I shall be found ever ready to maintain my own position, and to defeat those whose malevolence may lead them to injure the interests of their friends, as they may consider they do those whom they style their enemies. I do not wish that they should include me in the category of the one or other. I have a duty to perform, and while I possess the confidence of the body of adventurers, I shall be found ready at my post to attend to the affairs of the mine, which is my province, and not letter-writing, leaving the results to prove whether I have performed my duty, or otherwise, on which I am fully prepared to stand or fall. I have to apologise for thus taking up space in your columns, but shall henceforth treat all anonymous scribblers with that contempt which alone they merit. J. CARPENTER.

February 18.

EAST BIRCH TOR MINING COMPANY.

SIR,—Your report of the meeting of this company, in last week's Journal, has, I find, given rise to what are called "Dartmoor suspicions." May I beg of you to allow me a word of explanation in your paper of this week. When the company assumed a London direction, there remained unissued 1100 shares, and the directors guaranteed a dividend of 6 per cent. out of the proceeds of the sale of ore, to those who would take them up; but owing to certain mismanagement on the part of the former captain, and the delay from March to December in effecting the complete registration of the company, only 400 shares were taken up—still, in the interim, nearly 300*l.* worth of tin was raised, and the per centage of 2*s.* per share, as guaranteed to the new shareholders, was declared, as a matter of course. It was never intended, however, to insinuate that the mine had paid its way, and was enabled to declare a dividend out of the profits, and, if this has been understood, I beg distinctly to affirm the reverse; nevertheless, as one of the new shareholders, who claim under that guarantee, I must say that I am perfectly satisfied as to the prospects of the mine; and as the honorary secretary of the company, I may be allowed also to say, that the mine is now freed from its temporary embarrassment; and the best test of the good faith now existing is, that nearly the necessary number of shares have been taken up within the week, and, consequently, the requisite funds will soon be at the bankers for effecting the uninterrupted and effectual development of the wealth that is confidently affirmed to exist in that locality.—T. A. READWIN: *Winchester-buildings, Feb.* 20.

WEST POLGOOTH MINE.

SIR,—In the discussion that is now going on in your Journal, relative to the above mine there is a letter, written by one who signs himself "A Looker On," St. Blazey, who, I believe, lives just the distance from that place I do from Lombard-street, or its neighbouring alleys. He says he is not strong in figures; there was no occasion for such an admission, as his estimate shows at once the very fact. He is, moreover, no miner, otherwise he would have known that 800 persons working on a mine, are not 800 pick and gad men. He says he happened to go underground before West Polgooth ceased working; he must be a brave old veteran now, for all who live in this neighbourhood well know the mine has not been worked, below the adit, since the year 1795, 55 years ago. But there are men, in the neighbourhood of the mine, who can remember the time when she last worked, and from whom, I understand, the present company got their information as to the depth of the old workings. Sir, I am a miner, and beg to tell the "Looker On" (a very good cognomen, for it is very evident that he has never done any work), that if all the West Polgooth lodes are fairly worked away to the 110 fm. level, they would give employment not only to 800, but to a considerable number above that, for the next 20 years. The Great Polgooth Mine, at the present time, employs about 900 persons, and if you were to ask one of the agents there (who are real miners), they would say that double the present number might be employed before they took away 70 fms. of their tin ground. Next comes Great Hewas Mine, which is adjoining West Polgooth; he says that the loss on the first working was 100,000*l.*; now, we all know very well here, that the lowest pitch ever set in the mine was 6*s.* 6*d.* in the 1*l.*, or what we here term one-third tribute; and we also know very well that the mine returned, in five years, about 110,000*l.* worth of tin, which, according to my notions of mining, ought to have left, after paying every expense, 60,000*l.* clear profit, which the mine did, and more than that. But how the money was spent (by those in the secret) perhaps "A Looker On," as he appears familiar with the district it is situated in, may explain, especially as this mine must have been worked in his lifetime. About three years and a half since, we formed a company to again work this mine, and succeeded in getting our pit work down about 40 fms., when our capital was exhausted, and we were obliged to give up. Nevertheless, we returned, in about fifteen months after the engine went to work, nearly 4000*l.* worth of tin; and I may say, the greater part of the time there were not more than from 25 to 30 pickmen employed underground.

The concluding remarks of the "Looker On" intimate that those who have never been underground might believe what is stated in the prospectus of the West Polgooth Company to be true, and if we were to ask the late purser (brave old man), he would say the loss was 10,000*l.* Now, as a set off against this wilful batch of falsehoods, I will explain what "A Looker On" would have done, had he known anything about our neighbourhood. Some few years ago a mine was opened on the copper lode, about half-a-mile from the present West Polgooth Mine, and after three years working was given up as a failure. It had nothing whatever to do with the Great Hewas lode, or the Great Polgooth lodes, and every person in this neighbourhood can bear testimony as to its being a fact. The mine was called South Polgooth, and the levels are still open; I believe it was stopped through the system of share-jobbing, and other bad management in London, which has been the ruin of most of our mines in their early workings. The mine, although "knocked," will again, some day, be set to work, and whoever undertakes to work her will be amply repaid for their outlay, if they work her fairly, for we here all know very well there are many rich lodes in the sett. AN ADVENTURER IN THE GREAT HEWAS MINE.

St. Austell, Feb. 20.

[We have received another letter on this subject from "A Reader," but have not space for its insertion. He states he had hoped that the discussion would have solved the problem of "What is, and what is not, the Cost-book System," but expresses himself disappointed. He considers "Argus" has evaded the point; he was the first to offer combat, and chose his own ground; "A Shareholder" met him in a fair spirit; but by degrees the original question has been lost sight of, and has become a personal squabble. In this view of the case, we cordially agree, and must now inform our correspondent that we decline inserting any further communications on the subject, unless paid for as advertisements. Mr. P. Hunt's communication on this subject we must also decline, it really bearing in no degree on the subject.]

DARTMOOR MINING COMPANY.—This company, which was established in Plymouth, some 10 years since, and which subsequently worked several mines in Dartmoor, has recently been dissolved, and its affairs completely wound up

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The lode in Field's engine-shaft, sinking under the 60 fm. level, is still its usual size, but not quite so good for copper ore as last week, but has a beautiful appearance, being mixed with copper ore and pretty soft spar. The lode in the 60 fm. level, east of the said shaft, is 5 ft. wide, and on the south part of the lode the ore course is from 18 in. to 2 ft. wide, and on the north part there is some rich veins of copper—the whole lode is worth 10*l.* per fathom. At the 60 fm. level, west of the engine-shaft, the lode is about 4½ ft. wide, and has a very cheering appearance. In the 50 fm. level east the lode is 4 ft. wide, but as there is yet but little ground driven since the last report, I cannot speak of any change. In the last report the tribute for the pitch over the 60 east should read half a farthing to 1*l.* for 10 tons, after which 2*s.* 6*d.* to 1*l.*

BARRISTOWN.—The lode in the 30 fm. level end west has not changed in character since my last, although I consider the ground about it more favourable for ore. In the 30 fm. end east we have cut the slide, or divisions of ground which we had in the 18 fm. level over this, and the lode continues to the south of it, which alters the course of the end; it does not produce altogether so much lead as last reported, but, from its present appearance, I have no doubt it will continue between the two channels of ground. In sinking the slob shaft, below the 30 fm. level, we have a change of ground much more favourable in appearances for lead than we had when we commenced it at the 30; this shaft is down about 4 fms. under that level, and we expect to cut the lode in it about the 40 by the end of March; the stopes in the back of the 30 fm. level are producing about 5 or 6 cwts. lead per fm.; the stopes in the bottom of the adit level are producing little or no ore. The cross-cut driving south of Nangio's shaft, in the adit level, has intersected more branches of white iron, containing lead, but we still hope to cut a better lode here.

BEDFORD UNITED.—In the 103 fm. level, east of the engine-shaft, we are driving south, to communicate with the 103 fm. level, west of Burley's winze; in this level, east of Burley's winze, we continue to drive north to get through the lode, the capels having proved extremely hard, and prevented our cutting more than 6 in. into the lode, which has every appearance of a promising orey lode. I hope next week to be able to report more fully on the matter. In Crowe's winze, in the 90 fm. level, the water has been too quick to admit of much being done, the lode, therefore, continues worth 35*l.* per fm. The lode in Bray's winze, in this level, is 2½ ft. wide, producing saving work, and looking very promising. In the 90 and 70 fm. levels east we are still driving by the side of the lode. The pitches, on the whole, are yielding good returns.

CARTHEW CONSOLS.—In reporting upon the upper mine, I would first call your attention to the engine-shaft, wherein I find the ground very good, and the men progressing very well, and the lode no less pleasing; it is about 1½ ft. wide, and very good work in lode throughout. At the north end, in the 65 fm. level, a very good lode, principally in copper, is found, which is from 2 to 3 ft. wide; the south end, at this level, is as last reported. In clearing the level in the 50 north, the back is found to be close timbered, consequently I can see nothing of the lode. In the 28 fm. level south the men have succeeded in intersecting the part of the lode gone off west, which looks well. The tribute pitches throughout look very well indeed. A considerable improvement on last week's appearances is witnessed, as well as an indication of a much greater, but the want of power for hauling the stuff (though the horse-whim is continually at work), causes many hindrances to men already engaged, as well as keeps us from engaging more. At the lower mine I find no important alteration.

EAST CROWNDALE.—In the 28 fm. level, east of the sump, the lode is composed of mundic and peach, 3 ft. wide, also the 28, west of the middle shaft; in the 28 fm. level, east of the middle shaft, the lode is 3 ft. wide, composed of mundic, peach, and a little tin. The middle shaft is down about 7 feet below the 28 fm.—lode large, and producing some excellent stones of tin. Our tribute pitches much as last reported.

EAST WHEAL GEORGE.—The following report from Capt. Carpenter was read at the meeting, held on the 19th inst. (and referred to in another column of our Journal):—In accordance with your request, I herewith beg to furnish you with particulars relative to this mine and the past operations, and at the same time my opinion as to the best course to be pursued for the further prosecution of the mine, as presented by the present prospects. Since November last the lobby has been driven 40 fms., where it took the lode at a depth of 12 ft.—the indications there presenting themselves sufficiently warranting an extension of the operations on the course of the lode; the ground, however, at that point, being in a very unsettled state. The orey part of the lode here was not more than 9 ft. high in the bottom of the level, with occasional stones of ore and bunches of beautiful gossan, very much mineralised—forming a great inducement to follow on the course of the lode, by driving east on the lode, whereby its exact run and underlay, and further proving the lode, might be correctly ascertained. This being effected, was of a highly satisfactory nature, and the direction of the lode was found 15° south of east; and, in order to prove the underlay, a winze was sunk to the depth of 3 fms. Finding it impracticable to carry the winze to a greater depth without the aid of machinery, and sufficient proof having been afforded of the nature and productiveness of the lode, as also its underlay or dip (about 2 ft. in a fathom north), these workings were suspended until machinery should be erected. The lode here is 3½ ft. wide, with well-defined walls, and yields, so far as it has been proved, 4 tons of ore to a fathom, with an average produce of 9 per cent., which, taken at the present standard, is equal to about 6*l.* 15*s.* per ton. To prosecute the mine with energy, I should recommend the immediate erection of a water-wheel, of 40 ft. diameter, and 3½ ft. breast, which would be capable, judging from the coming water, to put the mine down to a depth of 70 fms.; and I have already marked the ground where the wheel may be placed to command the drainage of the mine, as well as the application of a crusher, so as to prepare the ores for market—there being a never-failing supply of water. Judging from the appearance of the lode already explored, the value of the ore which may be risen above the 12 fm. level, to the extent of the present adit end (30 fms.), assuming 2 tons to a fathom, would give 2700*l.* From an estimate of the expenses which would be incurred in erecting machinery, and to cut the lode at a depth of 12 fms., with cross-cut from the perpendicular shaft, a sum of about 600*l.* would be required, when ore might be at once raised. The perpendicular shaft referred to is calculated to take the lode at 40 fms. deep, cross-cuts being driven in the interim. In working on the course of the lode, in ore ground, at the 12 fm. level, the cost may be assumed at 3*l.* per running fathom, which, to carry the whole of the lode to the extent at present opened, would be attended with a further cost of 600*l.*, to which must be added dressing charges, dues, &c., 550*l.*—making together a total cost, including the machinery and opening the ground 20 fms. on the course of the lode, to a depth of 12 fms., 1750*l.*—thus leaving a surplus of 950*l.* in cash, besides the work done and the discoveries made, and facilities presented for future working, while any increased returns beyond 2 tons per fm. would considerably increase the contemplated profits, as there would be no charge on the additional ore beyond the drawing, dressing, and return charges. The accompanying calculations will be found sufficiently explanatory to warrant the conclusions arrived at, while it affords me much gratification in being able to congratulate you on possessing a property which presents such encouraging prospects, and which may be considered of rare occurrence. I have, through Mr. English, forwarded you a stone of ore, taken from the bottom of the winze (2 cwts.), and beg to refer you to that gentleman for more minute detail; the stone is what I consider fair work, and I should think will yield 18 to 20 per cent., although in my estimate I have only taken the produce at one-half, and in the same manner as regards returns.

ESGAIR LLEE.—In my last report of this mine, I informed you that I expected we should, in the course of a week, communicate Morgan's winze, sinking under the 10 fm. level, to the deep adit east of the cross-cut, on the north lode, and I am happy to say this much has been accomplished; this will very much facilitate our future operations, as it will thoroughly ventilate the principal part of our present workings, and enable us to commence at once to drive a 12 fm. level on the north lode, west of Morgan's winze, with, in my opinion, every probability of success, for the level above this lode is 6 ft. wide, of a most promising character, composed principally of a first-quality gossan, quartz, and lead, and for some fathoms in length will yield about 10 cwts. of ore per fm. In my last general report, dated 23d Nov., I informed you that in the deep adit, east of the cross-cut, on the north lode, 8 fathoms behind the end, we have found it necessary to leave the south part of the lode standing for 4 ft. wide, in consequence of its being so hard and wet at the same time; now this part of the lode is drained quite dry, and we have commenced taking it down at about 7 fms. east of where we first began to leave the lode standing; here we find the lode to be more productive than was ever anticipated, and will yield, on an average, full 1 ton of ore per fm., and we find the orey part of the lode to extend equally good both east and west; this I think a most important improvement, and gives quite a new feature to our prospects, and carries our ultimate success, I think, beyond the slightest doubt; and I have now no hesitation in recommending the erection of a crushing mill, during which we might stock our work, for it is a bad policy to dress it by manual labour, at the expense of 60*s.* to 70*s.* per ton, when, by the aid of machinery, it may be done for less than one-quarter of the money; and I am quite certain it would be most judicious to suspend the dressing till we have the aid of machinery. The caunter lode, in the 12 fm. level east from surface is looking very kindly, and will yield about 5 or 6 cwts. of ore per fm. The caunter lode, in the deep adit, east from the base of the hill, is a little improved since my last report, looking more promising, and is producing some good saving work—equal in value to about 2 or 3 cwts. of ore per fm. I have no hesitation in saying, that I entertain not the slightest misgivings as to the results of this concern, aided by a little more of proper trial and development. In calling your attention to our future operations, I propose, in the first place, to drive the deep adit, east of Morgan's winze, on the south, or orey, part of the north lode, which appears now to be running behind, or south, of the present level; and if so, it must also be going up to the south of Morgan's winze, but this we should ascertain in the course of three weeks; secondly, to extend west on this productive part of the lode, where the lode in the bottom of the level will yield full 30 cwts. of ore per fm., and looking exceedingly promising; also to drive the 12 fm. level, west of Morgan's winze, on the north lode, which shows every probability of productiveness; also to push on the 12 fm. level east, on the caunter lode, and as soon as convenient, or our circumstances may admit of, to resume sinking the engine-shaft, for I am quite certain the prospects now in our deep adit will fully justify our doing so; and I would by all means advise to put in a tramroad in the deep adit, on the north lode. Now, in case you may approve of driving the five levels proposed, exclusive of sinking the engine-shaft and dressing, our cost will be about 150*l.* per month.

HOLMBUSH.—The rise above the 132 fm. level is communicated to the tottom, sunk about 6 fms. below the 120 fm. level, since which we have set a tribute pitch to six men, at 5*s.* in 1*l.* The south lode, in the 120 fm. level south, is 4 ft. wide, composed of soft quartz and stones of lead; the ground is much softer, and the lode kindlier than it has been; the stopes in the back of the level will produce half a ton of lead per fm. The ground in the 120 fm. level cross-cut south, towards the flap-jack lode, is again very much improved. The ground in the 110 fm. level cross-cut, driving west to intersect the flookan part of the lode, is favourable, and a large stream of water issuing from the end. The flap-jack lode, in the 100 fm. level, east of the great cross-course, is 20 in. wide, composed of mundic and stones of copper ore. The pitches in the back of the level are very much improved indeed, and will now produce 4 tons of copper ore per fathom.

HEIGNSTON DOWN CONSOLS.—We have cut 4 feet into the lode south in the 35 fm. level cross-cut, which contains ore throughout, more or less, but not rich; we are now driving on its course east, and, I am glad to say, it produces some good saving work for copper; the 35, east of the said cross-cut, on the north part of the lode, is still kindly, producing occasional stones of ore; the pitch in the back of this level is not looking quite so well as last reported on; the winze sinking in the bottom of this level is a little improved, carrying a small leader of copper ore on the north wall of the lode.

HENNOCK (SILVER-LEAD).—We have got 20 tons more of gossan to surface, and shall sample it on Wednesday, the weather permitting, and shall immediately send on samples to the different smelters, who have applied for it. We are getting on as well as the weather will permit with the wheel, and hope to fix the axle on the wheel-pit to morrow; all the other parts of the wheel are ready to put together. We are also clearing the adit level towards the south whim-shaft for 10 fms., and then we shall commence working on the backs of the adit. We shall put the wheel to work on Saturday week. We have been employed the last two days in sinking a bob-pit, and have come down upon the back of the lode, where we have taken up some very good work for silver-lead, worth 10*l.* per fm.

KESWICK.—At the Brandry Mine the ore in the 10 fathom level rise continues good. In the 20 fm. level north forehead, the vein looks better than it ever has done, and seems likely to answer our expectations, as we cut a small bunch of ore yesterday, and are in hopes we have hit upon the piece of ore for which this level was driven—viz., the ore which is going down from the sett sump; if so, we have 17 fms. of whole ground above us. In the 20 fm. sump the ore is improving considerably, both in length and width, and in places we have it 6 in. of nearly solid ore. At Thornthwaite, the 17fm. level sump in vein; the ore is looking remarkably well, with a good looking vein. In the 17 fm. level sump on string; the ore is a little better than last week; this ore is yielding very badly, as it runs in strings, varying from a ¼ in. to 3 in. in width, which causes a great quantity of crude ore to be raised and gone through before it is laid down. The bottom level continues poor, and the ground is still hard and wet. We do not expect to get at the main bunch of ore till we get a little further on, owing to the dip, although we are now in a perpendicular line, with the sump on the string in the level above.

KIRKCUDBRIGHTSHIRE.—The lode in the 62 end, west of Stewart's, is 3 ft. wide, with kindly ground, yielding 12 cwts. of lead to the fm. In the 62, east and west of Keith's, the lode is still unproductive. In the rise over the 50 end, west of ditto, the lode is 3 ft. wide, yielding about 5 cwts. of lead to the fathom.

PENZANCE CONSOLS.—Since the last report a great improvement has taken place in this mine. The stopes west from Carthew's shaft are now worth upwards of 25*l.* per fm., and the western stope, from the same shaft, is worth upwards of 20*l.* per fm. I may add, that this lode appears much wider and richer as we increase in depth. There is also a fine lode of tin in the 10 fm. level, both east and west, on the north lode. We have now 56 men and 6 boys employed in the mine. The stones of tin broken this week cannot be surpassed in this county, either for their size or quality, and, from present prospects, the mine never looked better; and at this time the floors are full of rich tinstuff; one pare last month broke on tribute upwards of 125*l.* worth of tin, and the same has been sampled (and finished) this day.

RUNNAFORD COOMBE.—The shaftmen are getting on very well with their work, and I hope, in about six weeks, they will have completed their bargain, which was 3 fms. for 85*l.*; the ground is still very hard, but more favourable for sinking than when they commenced. The steam-engine works well, and is going about eight strokes per minute in the shaft, consuming about 7 cwts. of coals in 24 hours. We are getting on with the tin, and, if the weather permit, it will be ready for the market by the end of the month.

SOUTH WALES MINES.—The south, or Frongoch, lode, in the deep adit, east of the Rhydnet river, is much the same as when last reported, looking promising and producing some stones of ore, but not sufficient to set a value on. I have taken four men from this level, and put them, with two others, to drive the cross-cut north, to cut the lode about 200 fms. east of the present workings, for the month, at 2*l.* 10s. per fm. Since my last report, we have put in 3 ft. deeper levels to the old workings, near the top of the hill, and find the lode 12 ft. wide, with a branch of rich ore on each wall, varying in size from 1 to 3 in. wide, with veins of ore running through the lode, and will yield, I think, from 6 to 10 cwts. of ore per fm., and seems to improve every foot in depth—in fact, I never saw a more promising lode so near the surface. There is no hesitation in reporting the lode to be one of more than ordinary promising character, and have every reason to believe, ere long, to be able to congratulate the shareholders in this concern of our success in intersecting a good lode in the cross-cut 12 fms. below. At our present scale of workings, our cost will be about 55*l.* per month.

SOUTH WHEAL JOSIAH.—I am glad to inform you, that we have some improvement in this mine. We brought from the end yesterday some fine stones of ore, from 10 lbs. to 15 lbs. in weight, and it appears to be coming in at the bottom of the end. The winze in the bottom of the adit is also looking better.

SOUTH WHEAL TRELAWNY.—The ground in both cross-cuts, east and west of the engine-shaft, is more favourable than it has been, especially in the former one, being reset at 3*l.* per fm.—the first extent having been accomplished in that of the latter; it is reset at 5*l.* 10s. per fm. The stratum in each is a dark blue killas. Since the meeting the shaftmen have divided and cased down the shaft, cut plat, put in penthouse, and are now engaged in cutting ground for cistern, &c., to fix the lift preparatory to sinking below the 50 fm. level, such work will be completed in a few days.

TRELEIGH CONSOLS.—In the 100 fm. level, west of Garden's, the lode is 3 ft. wide, with stones of ore. In the 90, west of ditto, the lode is 18 in. wide, with good stones of ore. In the 80, west of ditto, on the north part, the lode is 18 in. wide, with good stones of ore, and more kindly; in the 80 ditto, on the south part, the lode is 15 in. wide—poor. In the 70, west of Garden's, the lode is 3 ft. wide, and worth 9*l.* per fm. At Wheal Parent engine-shaft, below the 40 fm level, south of the lode, in the 40 fm. cross-cut south, towards the middle lode, and in the 40 east of shaft, the lode is 18 in. wide, and worth 4*l.* per fm. In the 30 ditto, the lode is 18 in. wide, and worth 2*l.* per fm. At the middle lode, in the adit east of Nicholson's shaft the lode is 1 ft. wide, with good stones of ore, and looking very kindly.

WEST WHEAL JEWEL.—The 85 fathom level, west of Williams's cross-course, on Wheal Jewel lode, is unproductive. The 70 fm. level, west of ditto cross-course, on the same lode, is worth 8*l.* per fm. The 85 fm. level, west of ditto cross-course, on the same lode, is unproductive. The 12 fm. level, west of Tregoning's shaft, on Tolcarne tin lode, is producing stones of tin; the deep adit level, west of ditto shaft, on the same lode, is unproductive. The shallow adit stopes, west of Tregoning's shaft, is worth 8*l.* per fm. The following stopes are working on tribute:—The stopes in the back of the 12 fm. level, west of Pryor's winze, on the same lode, are worth 18*l.* per fm.; the stopes east of ditto are worth 15*l.* per fm.; the stopes in the bottom of the 12 fm. level, east of Tregoning's shaft, on the same lode, are worth 25*l.* per fm.; the stopes in the bottom of the same level, west of ditto winze, are worth 24*l.* per fathom.

WHEAL PENHALE.—The lode in the north end, in the 30 fm. level, continues its large size, and its productions are equal to what my late reports have stated; the lode in the south end, at this level, has been somewhat disordered this week, but is fast regaining its late pleasing appearances and productive qualities. The lode in the winze, at the 20 fm. level north is very good indeed, but from the plenitude of water in it, we are compelled, for the present, to desist farther operations; this winze and the lode in the pitch at the same level, in the bottom south, leave no doubt of a good level, and very valuable backs to be found for a great length in the 30 fm. level. I have placed the men who were engaged in the winze above referred to to sink a winze in the bottom of the 10 fm. level north, as close to the end as we could get, when we had apparently a dead piece of ground to sink through; but, pleasing as it is to say, they had sunk only 4 ft. when they came into a good lode, about 1½ ft. wide. In extending the south end, in the 10 fm. level, I find the lode is much more regular in its formation, and a very great improvement is met with—it now being about 2 ft. wide, producing good work in lead, fine specimens of which have just been brought into the office. The various tribute pitches look very well indeed.

WHEAL SARAH.—I went underground in this mine on Monday last, and found the mine greatly improved going south. The bottom level has good stones of lead in the lode, and we have not more than 2 or 3 fms. more to get under the course of lead we met with in the shaft between the 20 and 30 fm. levels. We have also a good course of lead coming in the end in the 20 fm. level south; the lode is altering for the better fast. We have also a fair quantity of lead from the stope north of the engine-shaft, in the 20 fm. level. We have a fine course of lead on tribute in the bottom of the 8 fm. level. Our tributers are getting good wages. Mayhew's shaft is sinking very regular, in good ground; I have great anxiety in getting down this shaft, as all the lead is dipping south, and I believe, as soon as this shaft is down, the mine will pay a profit. We shall sell to-morrow 5 tons of rich silver-lead. All the machinery works well.

WHEAL SETON.—At the 110 fm. cross-cut we have intersected the south caunter, and cut into it 3½ ft., but have no north wall; the lode is composed of spar, mundic, and stones of ore, and of a very kindly appearance; we have about 4 fms. further to drive at this level to cut Kneebone's branch and the north caunter, which we hope to see by our next account. In the north caunter, in the 100 fm. level west, we are still driving on the north part of the lode only, which will produce 6 tons of ore per fm. In the 90 fm. level west we have, during the last two months, driven on a good course of ore; the lode is now large, but for the last 3 feet has been coarse, but from its present appearance we have no doubt it will soon resume its former productiveness. The lode in the winze sinking below this level, on the north part of the lode, will produce 3 tons of ore per fm. Having cut in south at the 90 fm. level, we have discovered a good course of ore driving back east, on the south part of the lode, which will yield 8 tons of ore per fm. In the 80 fm. level west the lode is 3 ft. wide, composed of spar, jack, and stones of ore, and looks more promising than it has for several fathoms driving. The stopes in the back of this level are set on tribute, at 3*s.* in 1*l.* We have communicated the eastern winze from this level to the 90 fm. level, on the south part, in the past week; the lode, for the last 9 ft. sinking, produced 8 tons of ore per fm. The western winze, sinking below the same level, on the north part, which is some fathoms before the 90 end, has been suspended, in consequence of an increase of water; the lode will produce 8 tons of ore per fm., down 7 fms. In the 70 fm. level, west of Tilley's, the lode is 5 ft. wide, composed of spar, mundic, and stones of ore, and looking more promising than it has hitherto done. In sinking Tilley's shaft, below this level, we have met with an improvement since the last account; the lode is 4 ft. wide, and will produce 6 tons of ore per fm. for the whole length of the shaft; the shaft is down 7 fms. below the 70. The 60 cross-cut, north of this shaft, is extended 40 fms.; the ground is favourable for driving, and within the last 2 ft. we have cut a strong stream of water, which leads us to think we are near a lode. The ground in the 60 cross-cut south is still favourable. At the south caunter, in driving the 90 fm. level west, on Kneebone's branch, we have intersected the south caunter, and we are driving on it west; the lode will produce 8 tons of ore per fm. In the 80 fm. level west the lode is 3 ft. wide, composed principally of spar, but of a kindly appearance. At Kneebone's branch, in the 100 fm. level west, the lode will yield 1½ ton of ore per fm. In the 90 fm. level west the lode will produce 3½ tons of ore per fathom. The lode in the winze sinking below this level is large, but contains only occasional stones of ore, down from 7 to 8 fms. The winze sinking below the 80 fm. level has been communicated to the 90 in the past month. In the 44 fm. level east, on the new lode, the lode is 9 in. wide, composed of spar, &c. The 64 cross-cut has been extended 18 fathoms south of Cock's engine-shaft; we have about 6 fms. further to drive to cut the last-mentioned lode, which we hope to see in two months; the ground in the north cross-cut, at the same level, is favourable for driving; the ground in the 34 fm. cross-cut north is also favourable. The tribute department, on the whole, is looking well; and, in conclusion, we are happy to say that the mine generally has considerably improved during the last few months.—[The above report was read at the meeting, held at the mine on the 11th inst.—the particulars of which appeared in last week's Journal.]

WHEAL TRELAWNY.—In the 82 end, north of Phillips's shaft, the lode is 2½ ft. wide, worth 8*l.* per fm.; in the same level, south of ditto, the lode is 2½ ft. wide, worth 7*l.* per fm. In the 72, north of ditto, the lode is 2 ft. wide, worth 7*l.* per fm. In the 62, north of ditto, the lode is 2½ ft. wide, worth 10*l.* per fm. In Trelawny's shaft the men have been employed last week in fixing bearers, cistern, &c., prepapatory to fixing a lift in the 82 fm. level. We have commenced driving south of this shaft in the 82 fm. level, where the lode is 4 ft. wide, worth 8*l.* per fm. In the 72, north of ditto, the lode is 4 ft. wide, worth 9*l.* per fm.; in the same level, south of ditto, the lode is 2½ ft. wide, worth 9*l.* per fm. At the North Mine, in the 55 end, north of Trehane, the lode is getting more regular, about 1 ft. wide, still poor. In the 40 end, north of Smith's shaft, the lode is 2 ft. wide, worth 8*l.* per fm. In the winze in the bottom of the 30 the lode is 2 ft. wide, worth 6*l.* per fm. Our stopes are looking favourable.

WHEAL TRESCOLL.—Since my last report we have a great improvement in our bottom level. In the 20 fathom level we have met with part of the B lode, No. 2, carrying a fine course of tin; we have not as yet taken down any of the lode, but we calculate, from appearances, that it is worth 30*l.* per fm.; ground very fair, and driving at 35*s.* per fm.; we believe in this level we have got through all the hard bars of ground. We have also holed the west whim-shaft in the 10 fm. level, and, from appearances, we have got through the hardness in this part of the mine; this shaft will lay open a great quantity of tin-ground, of good quality; we have also got the east flat-rod to work, and it answers well; I hope by this time six weeks we shall have this shaft down 20 fathoms deeper, as it is in very fair ground; this shaft will lay open new ground to that depth, and there is no doubt we shall have a quantity of tin from this place, as there is a course of tin gone down close by this shaft a foot in six, nearly fit for the smelting-house. Our large stamps is nearly ready for stamping. We have every prospect before us at this time of paying a dividend by the Midsummer meeting. The engine and all the machinery throughout the mine works well.

WHEAL VINCENT.—It is frequently the case with those who do not understand the multifarious strata of the mineral kingdom to form an opinion at variance with practical mineralogy, and thereby reject the stone which is destined to become the head of the corner; therefore, for several months, I have had to labour under mingled feelings of joy and regret, till I find the above remark is verified. I now have to state that we have cut the north lode, and have found it to be 5 feet wide, and are not through even yet. We have only driven 9 ft. on the course of it, and have broken a most excellent pile of tin, which we are now stamping. We are raising solid stones of tin of excellent quality; this lode is running through a flat bottom of very congenial granite strata, which is more than 200 fms. from the adjacent hill, from which it appears to run. The streamers, prior to our workings, have frequently discovered large rocks of tin protruding from the upper fissures of the lode, which we have now discovered at the depth of 12 fathoms from the surface. Two years ago there was no lode visible, or any correct rule that the miner could judge from, with the exception of the visible and stupendous magnificence of Nature, which is too frequently neglected by the practical miner; but now Nature has opened her rich store-house, and seems to offer a rich remuneration for all our toils and speculations. While writing the above, our pitman, in breathless haste, is now come to me, with his countenance lighted up, to inform me that they have discovered, on further cutting, a very rich leader of tin, which I intend seeing immediately, but I am not soon enough for this mail. I am happy in receiving a letter from a gentleman by the name of Adam Murray, Jun., Esq., who intends visiting the mine to-day; I hope to gather from him some further knowledge of the theories of geology, which are very useful to the practical miner. Our south lode still continues equal to last report.

FOREIGN MINES.

LINARES MINES.

LINARES MINES.—The following has been received from Mr. H. Thomas:

Linares, Feb. 9.—The whim having been idle for part of this week, in consequence of the men being engaged in the shaft and level about the work necessary for sinking, we have drawn but little lead from the tributers, and have not dressed any to add to the amount weighed in. The tributers are doing altogether pretty well, and will, we hope, get wages at the reduced rates at which the pitches have been set. We expect, in the beginning of the next week, to have the shafts of San Juan and Shaw ready for cutting, to sink below the 17 fathom level, which will then give us the necessary convenience for driving east and west on the lode, which the distance of the present end from the whim-shaft makes an operation of too much expense. I regret that it is not in my power to advise you, as I had hoped, of the completion of the work preparatory to sinking under the 30; this will, I expect, require another week. In other respects there is nothing new in the operations to advise you.

NATIONAL BRAZILIAN MINING ASSOCIATION.

Cocaes Mine, Dec. 12.—Since the 2d inst. very little alteration has taken place in the nature of the proceedings in the mine department, and we are happy to inform you of the success attending the operations, although the returns are not quite so good as during the preceding 10 days. The veins at Hamilton's lower stope, however, still continue very good, and by extending the stope northerly the ore appears to be improving in quality. The height of this stope, perpendicular to the underlie of the lode, is about 10 feet, which is nearly the same as any of our former stopes were worth taking away, but the lower layers here are much more promising than they usually were in the southern excavations; therefore, the thickness of those layers last found has not yet been ascertained, nor the footwall seen in many places—consequently, a few holes will be immediately blasted at the lower part of the stope for its development.

Cocaes produce—from 4th to 13th Dec. (10 days)..... *Mks.*	31	7	4	40
Cuiaba produce—from 7th to 17th Dec. (10 days).....	1	6	0	19
Total..... *Mks.*	33	5	4	59

UNITED MEXICAN MINES.—*Guanaxuato, Jan.* 7.—MINE OF RAYAS.—The enclosed report, by Mr. Parkman, will convey to the court the usual information in detail of the last month's operations in all our mines, which, with reference to Rayas is, I am happy to add, more favourable, inasmuch as the end of Santo Toribio to the south-east has greatly improved both in quantity and quality of produce; whilst the other equally important working of San Cresencio to the north-west, continues in good ore also. The pit of Santo Toribio being considerably below the aforesaid end of the same name, and less advanced to the south-east, a working has been recently commenced therein in the same direction, in the hope of meeting with similar ore; but the want of ventilation here delays our progress. With a view to improve the sales of ores on joint account with buscones, which will be observed continue on a low scale, I have lately begun a cross-cut in the old workings of San Ambrosio to search for the Malanoche portion of the vein, which yielded considerable returns some years ago. The usual Christmas holidays have again interfered with the operations during a portion of the present, as well as the past, month, as will be seen by the expenditure, as well as the returns shown in the comparative statement.

ALDANA.—The usual progress is being made in sinking the shaft and the interior pit of Santo Toribio, and provision is made for increased operations, when the two aforesaid points shall have become communicated.

PROMONTORIO.—To produce ventilation, and to prosecute our research with vigour towards Rayas, I have stimulated the workmen by tutwork, as well as allowing them the usual terms of buscones in following up the ore in the lowest levels of San Feliciano, which has not only improved in quantity, but is now of the same class and character as that of Santo Toribio in Rayas, and, consequently, is suggestive of extended operations in Promontorio, which shall be undertaken as early as practicable.

JESUS MARIA Y JOSE.—The sinking of the shaft was recommenced three weeks ago, and has now attained the depth of 25½ varas. The immediately adjoining mine of Villarina has cut a vein of ore distant 9 or 10 varas from the main lode, giving 10 marcs per monton, which naturally strengthens my opinion and expectations of Jesus Maria.

Haciendas.—These establishments continue profitably employed.—J. N. SHOOLBRED.

Report on the State of the Workings in the Mines of Rayas, Aldana, Promontorio, &c.

MINE OF RAYAS.—*Frente of Santo Toribio.*—This work has advanced 6·37 varas. A notable improvement took place in the vein, which was continued until last week, since which it has suddenly declined. A pozo will be opened in the good ore we have passed through. In the pozo already being sunk, there has been no material change.

Frente of San Diego.—This is a new work just commenced, from the pozo of Santo Toribio, and going to the south-east along the vein, in order to explore ground which was rich higher up. In the past week 1·71 varas have been driven.

Crucero of San Ambrosio.—This is a continuation of a cross-cut driven some years since for the purpose of cutting the Malanoche vein. It is supposed that the distance driven was not sufficient for the purpose, and that about 20 varas are wanting; 1·60 varas have been driven in the past week.

Pozo of Santo Toribio.—Work has been suspended in the extreme bottom of this pozo, in order to leave it as a reservoir for the water, and thereby, as much as possible, prevent its finding its way to San Cresencio, where the ore is of a better quality. In this last-named labor, the ore is making best to the north-west, and running nearly horizontally into the upper wall of the vein. This irregularity inspires doubts as to the continuance of the ore for any considerable distance. The contra cielo of La Purisima continues giving good ore, and the quantity would be materially increased, were it not for the want of ventilation. The remaining points worked in ore present no change worthy of remark, and nothing of speculative interest. A trial is being made of the ore near the entrance of San Ambrosio level. The nominal number of barmen continues the same, but a scarcity of workmen is experienced, that prevents, at times, making up the number required. The ore remitted to the hacienda in four weeks amounts to 2800 cargas. The workings of the buscones continue very poor, and with little prospect of improvement.

ALDANA MINE.—The shaft of this mine has been sunk, during the past four weeks, 9·25 varas, making its entire depth 108·02 varas. The rock has become somewhat more ramified with veins of quartz, and in consequence thereof has become harder. The price has, therefore, been raised in proportion. Another malachate, which is being put up, will facilitate the progress of the work. The pozo of Santo Toribio has advanced, in the four weeks, 9·39 varas, without any change worthy of remark. By the 15th, we propose commencing the cross-cut to communicate with the shaft. This effected, we may safely commence the trial of the vein by cross-cuts.

PROMONTORIO MINE.—The level of Santa Catalina has advanced 4·25 varas in the direction mentioned last month. Small bunches of rich ore have been met with. The vein is not yet cut through. The workings of Buscones are poor, with the exception of the pozo of San Feliciano, where we have resumed the work for ventilation of Santo Toribio. The ore has recently improved, and presents a similar appearance to that of Rayas.

MINE OF JESUS MARIA.—Unavoidable detentions prevented the commencement of work in the sinking of the shaft until the 20th of last month; the rock being favourable, 7·98 varas were driven in two weeks, making the total depth 25·50 varas. In the meantime we have commenced preparations for sinking on the vein, and shall be in a situation to drive on vigorously, should circumstances require. Reports of the state of the vein, where cut in the neighbouring mine of the Sangre de Cristo, are on the whole favourable, although somewhat contradictory. S. P. PARKMAN.

[From the *Plymouth Journal.*]

MINING.—The activity in this department of our industry continues rapidly to increase, and we trust that capitalists will be very careful in making their investments, since want of consideration in selecting, and of vigour and economy in prosecuting, mining operations, will, without fail, bring them into disrepute; the public, as in most other cases, judging by results, irrespective of the faults in management. We are glad to find that the operations in the Camborne and Redruth districts are extending. In Gwennap we are informed that mining is more brisk than it has been for many years, and that the Consols and United Mines are in a very prosperous state. The St. Austell district is not likely, owing to the prosperous condition of the mines, and to the extraordinary and judicious will of the late Mr. Treffry, to be in the slightest degree impeded by the death of that great mining capitalist, since, we are informed, that he has devoted the entire proceeds of his mines and income of his property to the completion of the schemes which he had left unfinished. That this may be done according to his design, he has left plans and sections of the unfinished works which he had undertaken, with the method of their completion; all which is to be effected within five years, under the superintendence of Captain Meredith, and at this period the entire property passes into the possession of the Rev. Mr. Willcocks, in strict settlement.

Liskeard District.—Our correspondents informs us that an important discovery has just been made by a party of tributers, in Clynacombe, the nature and position of which he does not explain.

The lode mentioned in our last as having been cut in Mr. Wyman's land, near Cargreen, is now in settled ground, and is 4 ft. wide, with two perfectly regular walls. The underlay is from 2 ft. to 2½ ft. in a fathom, and contains a considerable quantity of lead and silver. This is one of the most promising young concerns in our locality. The lode runs nearly east and west.

A correspondent informs us that four mineral lodes have, within the last month, been cut on Sowtown, in Buckland Monarchorum. One of tin taking the run of the Yeoland lodes, two north and south lead lodes, and a caunter lode; the indications on the backs are good. The estate lies in the vale south-west of Yeoland, and about two miles from Lopwell quay, and seven miles from Plymouth, adjoining the Plymouth and Tavistock turnpike, and within half-a-mile of the Plymouth and Dartmoor Railroad. A deep adit may be driven to cut the lode, and there is abundant water-power for machinery.

BIRCH TOR AND VITIFER.—At the old engine-shaft we have not been able to do anything in the sump, as our lifts are not sufficient to keep the water in fork. Everything is prepared for sinking as soon as we have a little dry weather, or can take up the water in the adit level, which has been cleared about 60 fms. west of the shaft. The ground is all taken away, and the level much crushed, so that we cannot take off the top water through the adit; it finds its way into the lode, but when this adit is cleared we shall do well. At Dunstan's shaft, the lode in the 10 fm. level west, is still disordered by the cross-course. The lode in the 20 fm. level west is producing good work, and laying open profitable ground; the lode in the 20 fm. level, east of this shaft, is at present poor. The pitches in the back of the 10 fm. level west are producing moderate work, and so is the pitch in the back of the 20 fm. level west; we have put the men to cut the plat in the 20 fm. level, that we may immediately resume sinking Dunstan's shaft. On the north lode, the ground in the cross-cut is still favourable for driving. I have not had time to make out my report, so as to show the various particulars of work done, and the cost of it, but you shall have all these particulars in my next report.

HEIGHTON DOWN CONSOLS.—A great improvement has taken place here, and the lode is estimated to be worth 40*l.* per fm.

TAVISTOCK CONSOLS.—The lode in the shaft is still divided by a horse of killas; the south lode is 2 ft. wide, composed of mundic, prian, peach, spar, and tin; the north, a main part of the lode is out of the shaft and has not been cut into for sometime. The lode still continues large in the adit, and carries tin.

COPIAPO MINING COMPANY.

The half-yearly meeting of proprietors was held at the offices of the company, Austinfriars, on Wednesday, the 20th inst.

HEATON ELLIS, Esq., in the chair.

The advertisement convening the meeting having been read, the CHAIRMAN submitted the following

REPORT.

Feb. 20.—Since the meeting in July last, the cargo of the *Balgownie* (453 tons) has been sold at Swansea. The ores averaged 28½ per cent. of copper, and realised 22*l.* 8s. 6d. per ton, leaving a profit of 2364*l.* The *Sion*, with 468 tons of copper ore, sailed from Copiapo for Swansea, on the 16th October last, and may be daily expected. The directors have every reason to believe she will arrive to a good market. The *Cuba*, the last vessel chartered by the company, sailed from England in the month of November last; she will load about 500 tons of copper ore, and be expected to arrive towards the close of the year. During the six months, ending 30th of June last, the quantity of copper ore raised at the company's mines has only been 330 tons, owing to the great scarcity of native labourers. The stock of ores lying in the Valley of Copiapo, after loading the *Sion*, amounted to about 1440 tons. The manager expects shortly to be able to set the new copper mine of La Compania to work, and, from present appearances, expects it will yield a large quantity of rich ore. The company are in possession of 94¾ barras, purchased by their manager, in 11 different silver mines, in the mineral of Tres Puntas, the cost of which purchases has amounted to about 3500*l.* The proportion of expenditure incurred by the company at these mines, since operations first commenced, in Oct., 1848, has amounted to about 2000*l.*, making the whole outlay 5500*l.* The quantity of plata pina and bar-silver received in England, the produce of these, has been 3824 marcs, which have realised the sum of 6500*l.* net proceeds, besides 522 marcs of plata pina (about 850*l.*) sold in Copiapo, and the value of the silver ores not yet amalgamated. The cost and expenditure at the four gold mines purchased for the company during the above period, has been about 1600*l.* One ingot of gold which arrived in England was sold for 215*l.*, and the manager hopes to be able to make another remittance shortly. The reports as to the state and prospects of these mines, up to the date of the last advices, continue highly satisfactory. The crops of grain on the estates are described as looking very fine; but there was a great scarcity of grass on the pastures, in consequence of swarms of caterpillars; it was, nevertheless, expected that the supplies of barley and straw would save the company from the bad effects of this scarcity. The directors have the pleasure to announce the safe arrival of the *Lucy Wright* at Copiapo, on the 30th of November last, with Assistant-Captain Nancarrow and 15 Cornish miners on board, besides a very efficient supply of mining tools and implements. The cost and expenses thereby incurred have been 2100*l.* The directors have great satisfaction in being able to lay before this meeting a very interesting report from Captain Waters of the discovery of an excellent road from the mines at Tres Puntas to the Port of Flaminco, about 24 leagues distant from the rich copper mine of La Compania, with a good supply of water, and sufficient pasture on the route to support the mules during three or four months every year. Steps have been taken to secure to the company the benefit of this discovery. There are some copper mines near this road, which Capt. Waters proposed to denounce for the company.

It was moved and seconded that the report be received and entered on the minutes.—The thanks of the meeting were then voted to the directors for their attention and management of the affairs of the company.

CONDURROW MINING COMPANY.

At the two-monthly meeting of adventurers, held at the mine, on the 18th inst., the accounts were examined and passed, showing—Balance last account, 286*l.* 18s. 2d.; tin and copper ores sold, 2476*l.* 11s. 1d.=2763*l.* 9s. 3d.—By labour cost, Dec. and Jan., 1231*l.* 11s. 5d.; merchants' bills, 287*l.* 17s. 11d.; Camborne poors'-rate, on dues for the year 1849, 77*l.* 6s.; dues, Dec., Jan., and Feb., 123*l.* 10s. 2d.; dividend, 3*l.* per share, 786*l.*; leaving balance to next account, 275*l.* 3s. 9d.—It was resolved that Mr. Wm. Combe's mill be purchased, and a stamps be erected on the same; that a steam-whim, with 18-inch cylinder, be erected, to command the eastern part of the sett; that Mr. Trestain be clerk, at a salary of 6*l.* 6s. per month, and that in future Mr. Joseph Vivian's attention be devoted to underground operations.

The following report, from Captain N. Vivian, was read to the meeting:—

Feb. 18.—The prospects of the concern, upon the whole, are improved since our last meeting, having cut the lode in the 80 cross-cut, under the bottoms of the 70 fm. level, east of Pryce's sump-shaft. The lode is cut into about 5 ft., 18 in. of the north being good for ore, and, it is probable, will be found wider, as it is my opinion that we may be a week in reaching the north wall, the lode being very hard. After discovering the north wall, the cross-cut will be continued north several fms., for the purpose of intersecting the Caunter and Llandower lodes. The winze in the 70 continues very productive, and is 5 fms. beyond the 80 fm. level east. The sump is sunk to the 90 fm. level, but we shall continue to sink it 6 or 9 ft. before we commence driving east and west from it. The shaft has been rather poor than otherwise; in sinking this lift it has, however, yielded some tin, and there is a part standing on the north which we think will be found productive, and we believe that the lode, in the 80 fm. level, will be found to the north. A cross-cut north and south will be driven, as we believe that a lode which falls in with our main lode in the western part of the mine cannot be far south of us at the 90. It is likely also that a cross-cut will be extended north, not only to cut the lode referred to, but also the Caunter and Llandower lodes. Hope's shaft will be holed to the 70 in the course of this month. Woolf's shaft is already holed to the 10 fm. level. We have sunk this hard shaft more than 40 fms. perpendicularly, and have now the means of clearing up the old mine, which we calculate on effecting in the course of two or three months. The 40 fm. level, which we have driven east from Pryce's shaft, is now so near Woolfe's that we fear to extend it farther for the present; when these parts are communicated, a cross-cut will be driven at Woolf's, to cut Llandower lode, which cannot be more than 3 to 5 fms. distant, and this lode we shall cut in several places in the course of the year, not doubting it will be found, as heretofore, a valuable auxiliary. We carry on, as usual, a considerable number of tutwork bargains—viz., Sump-shaft sinking under the 90, the 80 driving east and west, 70 east and west, 60 east and west, 50 east and west, 40 east on Llandower and main lodes, 30 east on Llandower, and three adit ends, and another adit end we shall soon set to drive; cutting down Woolf's shaft, sinking winzes, &c. Several cross-cuts will be added in the course of a few months. We have no alterations to remark on the tribute ground.

EAST WHEAL GEORGE MINING COMPANY.

The first meeting of adventurers was held on Tuesday, the 19th inst., at the Queen's Arms Hotel, Poultry, when the accounts were laid on the table, with reports from Capt. Carpenter, Mr. Henry English, and Capt. Pomroy, from which it appeared that the leat was cut 111 fms., lobby opened 40 fms., shaft sunk on the course of the lode 3 fms., from which 8 to 10 tons of ore, average produce 12 to 15 per cent., had been obtained, and an adit level driven 20 fms., with good bottoms for ore—the expenses incurred on which had not exceeded 65*l.*, exclusive of the purchase of the sett and the legal expenses. An estimate for a 40-ft. wheel, pumps, launders, crusher, &c., with su face work, amounting to 600*l.*, with plans, were laid on the table, whereupon the meeting adjourned until the 26th inst., when a further call will be made.—The report of Capt. Carpenter will be found under the head of "Mining Correspondence."—The following was presented by Mr. English:—

Feb. 16.—Having inspected the mine, with the view to its further working, and the application of the required machinery, it is only necessary for me to report on the course proposed to be adopted, referring you to Capt. Carpenter's report as to the prospect which the mine itself presents. It having been ascertained that water can be brought in through Mr. Leach's land, so as to secure a fall of 50 ft., a leat, 111 fms. in extent, has been cut, the water being conveyed from that point by launders a further distance of about 70 fms. to the wheel. The ground is laid out for the erection of wheel and sinking the shaft, as marked in hand-sketch herewith. The lobby is being sunk about 3 feet, so as to secure the most efficient fall, and to render the water-power further available, by putting up, if necessary, a smaller wheel, to be applied to raising ores, crushing, or other purposes. The distance from the wheel-pit to the river is about 30 fms., and 6 fms. from the former to the shaft. The present operations (the leat being completed) are that of deepening the lobby, and excavating the wheel-pit, so as to communicate with the engine-shaft, which latter will be sunk so far as is practicable while the machinery is in course of erection, and which may be expected to go down 10 or 12 fms., in kindly killas ground, before putting out a cross-cut to take the lode. It is considered that within three months from the present time the wheel will be ready to put to work, and that in the interim the surface work will be perfected, and the shaft down 8 fms.; so that allowing three months, the like period for sinking the remaining 4 fms., casing shaft, and driving cross-cut 8 fms., to take the lode, the work may be completed by the 1st August next.

The expenditure to effect these necessary objects, and to bring the mine into a perfect working, if not productive, state, according to estimate herewith submitted, may be assumed at 550*l.* to 600*l.*, which includes all surface work, with purchase and erection of 40-feet wheel, 3½ feet breast, bobs, launders, rods, timber, capstan, ropes, chains, 12-fms. 9-in. pump, with clack and working barrel, sinking shaft to 12 fm. level, timber, &c., with cross-cut to take the lode; and, furthermore, including surface buildings and agency. The first month's outlay may be taken at 85*l.*, and that of the second at 125*l.*, which will, I think, cover all expenses, although the full amount (600*l.*), will be required in the time mentioned, so as to act upon the rule laid down—that of meeting merchants' bills and all charges every two months—whereby a considerable saving is effected.

The vertical shaft going down is contemplated to take the lode at about the 40 fathom level, cross-cuts being driven out in the 10 or 12 and lower levels, the power of the wheel being equal to keep the mine in fork to a depth of 80 fathoms, judging from the coming water. The cost for the past amounts to 65*l.* 13s., and I should think some 10 or 12 tons of ore, yielding 12 to 15 per cent., is now lying at surface. Every arrangement has been made for prosecuting the mine, with a due regard to economy; while, in conclusion, I can only refer you to the report of Captain Carpenter, which enters into detail as to the nature and prospects of the workings.

PENNANT AND CRAIGWEN CONSOLS MINING COMPANY.

At a general meeting of shareholders, held at the King's Head Inn, Poultry, on Tuesday last, the 19th inst.—Capt. THOMAS ROSE in the chair—the report of the directors stated that it was with pleasure they reported the progress of the Craigwen Mines, and the consequent near approach to the time when it would become a dividend-paying mine. Nothing was now wanting but energetic support on the part of the shareholders; greater progress would have been made, if calls had been punctually paid, but the directors had been obliged to limit labour, and even retard the erection of machinery. They had had the advice and personal services of Mr. John Taylor, jun., who in October last surveyed and reported on the mine; he also laid down a plan for carrying on the works, which has been strictly adhered to, as far as the resources would permit; they had hitherto been successful, and the mine promised great results. Much progress had been made in the eastern workings, and in clearing up the adit large quantities of very rich ore had been found, which had evidently fallen from the "old men's" barrows. The western end of No. 3 adit had also been

driven forward, so as nearly to cut the great silver-lead lode, and at the eastern end miners had been, and ought continually to be, stoping the richest description for silver. With regard to the Pennant Mine, the directors recommended to dispose of, or under-let it, as they understood there were several parties in treaty for it, and the sleeping rent of 230*l.* per annum was a great burden to the company.

From the statement of accounts, it appeared that the total receipts had been 2219*l.* 1s. 10d.; expenses, 1218*l.* 10s. 2d., leaving in hand at bankers, and in bills, &c., 1005*l.* 11s. 8d. There was a balance of assets over liabilities to the amount of 106*l.* 4s. 5d. It was resolved that all shares on which calls remained unpaid be forfeited without further notice, and that a loan be raised for the purposes of the company, not exceeding 600*l.*, in 25*l.* debentures, at 5 per cent. Mr. R. M. Smith was appointed a director, Mr. Bush an auditor, and the thanks of the meeting being passed to the chairman, the meeting separated.

STRAY PARK, CAMBORNE VEAN, AND WHEAL FRANCIS MINING COMPANY.

A general meeting of shareholders was held on Friday, the 15th inst., when the statement of accounts for four months, ending 31st December, were presented, showing—Balance last account, 404*l.* 7s.; copper ores sold, Oct. and Dec., 4070*l.* 4s.; tin sold, ditto, 33*l.* 9s.; profit from Wheal Francis to December 31, 49*l.* 18s. 7d.=4557*l.* 18s. 7d.—Tutwork, 1421*l.* 15s. 10d.; merchants' bills, 654*l.* 9s. 6d.; tribute pay on ores sold, 558*l.* 1s. 4d.; subsist. 614*l.* 11s. 9d.; lords' dues, 169*l.* 7s. 5d.—leaving balance in favour of company of 1139*l.* 12s. 9d. A dividend of 15s. per share was declared, carrying to the credit of next account, 389*l.* 12s. 9d.—The following report, from Capts. Eustice and Ralph, was read to the meeting:—

In the 56 end, driving east on north branch, by two men, at 4*l.* per fm., the lode is small and unproductive. In the 80 end, driving west, on Wheal Francis, by two men, at 6*l.* 10s. per fm., the lode is 8 in. wide, yielding stones of ore. In the 90 end, driving west in Wheal Francis, by two men, at 7*l.* 10s. per fm., the lode is 1 ft. wide, yielding stones of ore. In the 100 end, driving west in Wheal Francis, by six men, at 8*l.* per fm., the lode is 2 ft. wide, yielding 3 tons of ore per fm. In the 100 end, driving east on north lode, in Stray Park, by four men, at 7*l.* per fm., the lode is small and unproductive. In the 110, driving west on Wheal Francis, by four men, at 10*l.* per fm., the lode is 18 in. wide, yielding 1 ton of ore per fm. In the 120, driving west on Camborne Vean, by six men, at 11*l.* per fm., the lode is 20 in. wide, yielding 2 tons of ore per fm. In the winze sinking below the 120, by four men, at 7*l.* per fm., the lode is 20 in. wide, yielding 2 tons of ore per fm. In the rise above the 150 fm. level, by four men, at 7*l.* per fm., the lode is small and unproductive. In the 150 end, driving west by two men, at 7*l.* 10s. per fm., the lode is 6 in. wide, yielding stones of ore. In the 150 end, driving west on north lode, by six men, at 9*l.* per fm., the lode is 2 ft. wide, yielding 3 tons of ore per fm. In the 160 end, driving west by four men, at 8*l.* per fm., the lode is small and unproductive. In the 170 end, driving west by four men, at 10*l.* 10s. per fm., the lode is 3 ft. wide, yielding 3 tons of ore per fm. In the 170 end, driving west by four men, at 5*l.* per fm., the lode is 2 ft. wide, yielding 2 tons of ore per fm. In the stopes above the back of the 170, west of the western winze, by six men, at 3*l.* per fm., the lode is 2 ft. wide, yielding 3 tons of ore per fm. In the stopes below in the bottom of the 170 fm. level, west of western winze, by four men, at 3*l.* 10s. per fm., the lode is 3½ ft. wide, yielding 5 tons of ore per fm. In the stopes above the back of the 170 fm. level, east of the western winze, by six men, at 4*l.* per fm., the lode is 4 ft. wide, yielding 4 tons of ore per fm. In the stope above the back of the 170 fm. level, west of eastern winze, by six men, at 4*l.* 10s. per fm., the lode is 2 ft. wide, yielding 6 tons of ore per fm. In the stopes above the back of the 170 fm. level, east of eastern winze, by six men, at 4*l.* per fm., the lode is 3 ft. wide, yielding 3 tons of ore per fm. In the stopes above the back of the 180 fm. level, west of western winze, by six men, at 7*l.* per fm., the lode is 2½ ft. wide, yielding 5 tons of ore per fm. In the 180 end, driving east by four men, at 12*l.* per fm, the lode is 4 ft. wide, yielding stones of ore, with a promising appearance. In the 180 end, driving west by four men, at 12*l.* per fm., the lode is 1 ft. wide, yielding stones of ore. The cross-cut driving north in the 180, by four men, at 10*l.* per fm., is in from shaft 15 fms. The engine-shaft is down 4 fms. below the 190, sinking by eight men, at 24*l.* per fm.: a plunger lift has just been fixed in the 190 fm. level, and is working satisfactorily. Should our present prospects continue until next sampling, we calculate on raising 600 tons of ore, which, at the present standard, will probably sell at 5*l.* 5s. per ton.

TREGORDEN MINING COMPANY.

The usual two-monthly meeting of shareholders was held at Liskeard on the 14th inst, when the accounts were examined and passed, showing—Balance end of October last, 269*l.* 5s.; labour cost November, 135*l.* 6s. 10d.; materials, 43*l.* 6s. 11d.; labour cost December, 130*l.*; materials, 34*l.* 13s. 7d.; loan of engine, 12*l.*; deposit on engine bought of Wheal Sister adventurers, 50*l.*; lords' dues, 8*l.* 16s. 8d.=683*l.* 19s.—By ores sold, 162*l.* 15s. 7d.: less former credit (160*l.* 12s. 6d.) 2*l.* 3s. 1d.; lead ore ready for sale, 150*l.*; call, 224*l.*: leaves balance against the mine, 307*l.* 15s. 11d.

The following report, from Capt. W. Bryant, was read to the meeting:—

Feb. 14.—The 20 fm. level north is extended 12 fms. from Willcock's shaft, and we have driven through a regular and orey lode, averaging from 18 in. to 3 feet wide; in the present end it is 18 in. wide, composed of spar, capel, and white iron, with rich silver-lead ore interspersed, worth 3*l.* per fm. We have our stopes in course of working in the back of the 20 fm. level, south of Willcock's shaft, in which the lode is 18 in. wide, composed of spar, capel, white iron, with rich silver-lead ore interspersed, worth 4*l.* per fm. The 12 fm. level north is extended 9 ft. from the north shaft, in which the lode is 3 ft. wide, of a very encouraging character, composed of spar, capel, and white iron, with silver-lead ore interspersed, but not rich. The new engine-shaft is down 8 fms. from surface, price for sinking 5*l.* 10s. per fm. In conclusion, I beg to say that on Friday, the 15th, we shall sample 5 tons dry ores. This has taken double the time to get ready, owing to the want of engine power.

TREHANE MINING COMPANY.

The usual bi-monthly meeting was held at Liskeard, on the 14th inst. The accounts showed a balance of 1018*l.* 10s. 11d. in favour of the company. A dividend of 30s. per share was declared, and 300*l.* paid on account of the new engine, leaving to credit of next account 334*l.* 10s. 11d. The mine cost amounted to 759*l.* 9s., and the produce of lead ore was 1299*l.* 4s. 10d.

The following report, from Capt. S. Richards, was read to the meeting:—

Feb. 14.—In the 78 fm. level, driving north, the part of the lode being carried with the end is improved in size, and is, no doubt, the main part of the lode; it is about 7 inches wide, chiefly spar and mundic, with occasional spots of lead. We shall commence cutting plat in this level next week, and as soon as it is completed shall drive south also, on the main part of the lode. In the 68 fm. level south the lode is worth 5*l.* per fm.; the stopes in the back of this level are worth 18*l.* per fm.; at the north end, in this level, the lode is worth 6*l.* 10s. per fm.; the last 10 fms. have produced half a ton per fm.—say, 11*l.* to 12*l.*; the stopes in the back of this level are producing, on an average, 7 cwts. of lead per fm.—say, 7*l.* to 8*l.* The stopes in the back of the 62 fm. level are producing 8 cwts. of lead per fm. The lode in the stopes in the back of the 55 fm. level is worth 8 cwts. of lead per fm. The stopes in the back of the 45 and bottom of the 35 fm. levels are yielding about a quarter of a ton per fm. We shall sample next week about 55 tons of rich ore, and a parcel of No. 2, computed 30 tons; and we expect to sample two months hence about 30 tons of this kind of ore, which will be of a much superior quality than the present No. 2 parcel. There are a few small parts of the engine yet to be sent from the foundry, which are promised this week, and, if sent, we shall be in order to work early next week.

WHEAL LAWRENCE MINING COMPANY.

The two-monthly meeting of shareholders was held at the offices, Winchester-buildings, City, on Wednesday, the 20th inst.

SAMUEL WIX, Esq., in the chair.

Mr. T. A. READWIN (the secretary) stated, that there had been received on account of the mine, since the last meeting, 273*l.*, and expended, 348*l.* 18s. 9½d.: leaving a balance due to him of 75*l.* 18s. 9½d. He reported that the balance against the mine was about 130*l.*; that 249 shares had been allotted to the shareholders, in pursuance of a resolution, passed on the 20th of Dec., making a total number of shares now registered of 894, out of 1024; that 77 shares stood liable to forfeiture for non-payment of calls; that Capt. James had reported the holing of the shaft to the adit level without any accident; that everything was looking as favourable as possible; and that he expected to find copper above the adit level, in addition to silver-lead, upon sinking and driving further; that at no time, since the commencement of operations, had the prospects of the mine been so favourable as at the present; and that the indications for lead and copper fully justified the prosecution of the works with vigour; and that the adventurers might very soon expect a return for the continuous calls they had been subject to.—It was then resolved to prosecute the operations of the mine; that the 77 shares alluded to in the report be forfeited.—Mr. J. W. Gale was elected a director.—A call of 5s. per share was made, payable on 1st March next, and thanks were voted the secretary and Mr. Winterbottom for services rendered the company, and to the chairman for his efficient conduct in the chair.

WHEAL VINCENT MINING COMPANY.

A general meeting of adventurers was held at the Bull Inn, Bishopsgate-street, on Wednesday, the 20th inst., when a report was read from the finance committee, stating that the affairs of the mine had been most strictly investigated by Mr. Thomas Reid, jun., to whom they had been referred, and whose report showed the total amount of the liabilities of the mine to be 814*l.* 6s. 6d.; that Mr. Adam Murray, jun., had been deputed to inspect the mine; that they had an important recommendation to make relating to the future management—namely: that Mr. James Crofts, of King-street, Cheapside, should be elected secretary; and that the business of the mines be entirely managed in those offices. The report concluded with an opinion from the committee that the value of the property was undiminished; and they trusted that, with good management, ample returns of ore must be the result—the ground having been opened little more than 17 months, and some returns made; whilst they were assured by Capt. Spargo that tin ores, value from 300*l.* to 500*l.*, will be ready for sale in the course of the month of March.—It was then resolved, that Mr. Reid's report be adopted, Mr. John Mayhew's resignation of the purserships be accepted, and Mr. Thomas Reid, jun., be appointed to that office.—The committee of management for the ensuing two months was elected.—A call of 1*l.* per share was made.—The thanks of the meeting were voted to Mr. Mayhew on his resignation of the pursership, and to the chairman for his courteous conduct in the chair.—The next meeting is to be held on Monday, 8th April next.—The following is an extract from Capt. Spargo's report, dated Feb. 18th:—"I am happy to state, that we have cut the north lode most splendid; it is all of 5 ft. wide; I have stones of tin that I broke on Saturday of splendid quality."

BUDNICK CONSOLS.—At a meeting of adventurers, held at the account-house, on the 11th inst., a statement of accounts was submitted and passed, showing—Balance from last account, 26*l.* 19s. 10d.; ores sold (less dues), 204*l.* 8s. 1d.; carriage of tin, 32*l.* 5s.=209*l.* 12s. 11d.—To costs, &c., for Sept., Oct., Nov., and Dec., 189*l.* 7s. 8d.: balance in favour of adventurers, 20*l.* 5s. 3d.

ESGAIR LLEE.—At the adjourned meeting, held on Thursday, the 21st, at the offices, George-yard, Lombard-street, the accounts presented, showed a balance of 12*l.* 3s. in favour of the company, but future operations required a further call of 10s. per share. A highly-favourable report from the agents having been read, the meeting decided on the erection of a 40-ft. water-wheel and a crusher immediately.

EAST POOL.—The following is the statement of accounts to the 19th Feb.:—Mine cost for Dec. and Jan., 136*l.* 9s. 8d.—By copper ores, sold December 6th, 93*l.* 6s. 9d.; arsenic, 75*l.*; tin, 17*l.* 15s. 10d.; sundries, 5s.; water-charge, 12*l.* (less 1-30th dues, 39*l.* 14s. 8d.)=127*l.* 12s. 11d.—showing loss on the two months, 87*l.* 16s. 9d.; add balance last account, 504*l.* 6s. 9d., leaves present balance against mine, 592*l.* 3s. 6d.

PROVIDENCE MINES.—At the two-monthly meeting of adventurers, held at the mine on the 20th inst, the accounts were examined and passed, showing—Balance from last account, 96*l.* 5s. 4d.; tin ore sold, 2820*l.* 15s. 1d.; sundries, 2*l.* 15s. 8d=2919*l.* 16s. 1d.—By labour cost, Dec. and Jan, 145*l.* 4s. 5d.; carriage, 46*l.* 9s. 9d.; materials, 42*l.* 8s. 5d.; dues, 129*l.* 19s. 8d.: leaving balance, 86*l.* 13s. 10d.; from which deduct dividend of 6*l.* per share, 67*l.*, leaves balance to next account, 19*l.* 13s. 10d.

SOUTH WALES.—At the adjourned meeting of shareholders, held at the offices, on the 21st inst., the accounts presented showed a balance of 198*l.* 15s. 8d. in favour of mine. A further call of 5s. per share was deemed necessary.

ST. IVES CONSOLS.—At a quarterly meeting of adventurers, held at the mine, the accounts to the end of December were examined and passed, showing—Tin ores sold, 327*l.* 9s. 6d.; balance last account, 93*l.* 6s. 2d.=337*l.* 15s. 8d.—By labour cost and carriage, 240*l.* 10s. 8d.; coals, 21*l.* 11s. 6d.; merchants' bills, 59*l.* 19s. 1d.: leaving balance in hand, 15*l.* 14s. 5d.

WHEAL SOPHIA.—At a meeting of adventurers, held at the mine on the 5th inst., the resolution to adopt a "man-engine" was carried by a majority of 355, and which Mr. John Bennett was directed to provide for 35*l.*—a proper agreement to be made for its construction, which is to be satisfactorily completed by next meeting (the 4th April). The accounts showed balance in purser's hands, 37*l.* A call of 5s. per share was made. No report has been furnished.

WHEAL GAWLER MINES ASSOCIATION.—The first annual meeting of shareholders was held at the offices, Adelaide, South Australia, on 28th Sept. last.—H. G. STAKEMANN, Esq., in the chair.—The report from the directors stated that, in presenting their first report, they had much pleasure in assuring them that the state and prospects of the mines were of a very encouraging character—that the works prosecuted since the formation of the company had been, sinking a shaft 36 fms., erecting a whim, driving a cross-cut from the north gallery to intersect at 45 fms. from surface the several lodes known to exist, and which, being 70 fms. in length, was expected to be close on the main lode. The D'Almeira, Stakemann, and Dickens's lodes had all been opened upon, and bunches of ore found with silver from 5 to 37 ounces to the ton. Ores of good quality were being raised. It further stated that, in addition to existing smelting establishments in the colony, one was about being raised in the vicinity of Wheal Gawler, where all the improved processes of desilvering lead ores would be adopted.

TUNGKILLO MINE (SOUTH AUSTRALIA).—In our last Number we noticed the arrival, per *Cecilia*, of four splendid specimens of copper ore at the Australian Mining Company's offices, since which we have had an opportunity of inspecting them, and they certainly convey a great degree of surprise at the development of the mineral riches in that extraordinary and yet unexplored portion of the British dominions. The specimens consist of red and grey oxide, the green carbonates of copper, and they weigh respectively 8 cwts. 2 qrs., 6 cwts. 2 qrs., 6 cwts. 1 qr., and 2 cwts. 2 qrs. 19 lbs.; in the aggregate, 23 cwts. 3 qrs. 19 lbs., and the computed per centage from assays 40, 40, 50, and 45 per cent.; average 42 per cent. They are not unlike the Burra Burra ores taken out at shallow levels, and there is every favourable prospect of the Tungkillo Mine turning out a rich concern.

COMPANY OF COPPER MINERS IN ENGLAND.—The Bill to amend the constitution of this company was brought forward in the House of Lords, a few days since, by the Earl of Shaftesbury, and read the first time. A meeting of debenture holders will be held on Monday, the 25th inst.; the impression abroad is, that a committee from that body will be appointed to act with the shareholders' committee, so that an early arrangement may be effected. The decision of the Court of Queen's Bench, in the case of Hoyle *v.* Enthoven, has probably induced the debenture-holders to take this step, as, from the judge's opinoin, it appears they are not in so favourable a position as they thought themselves to be.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

BODMIN.—An impetus seems to be given to mining in this neighbourhood such as has not been experienced for some years. Several setts, which were known to be promising, but have been lying dormant for want of enterprise, are being sought after with a considerable degree of earnestness; some, there can be little doubt, if fairly tried, will make good mines. Clerkenwater Lead Mine is now being set to work in good earnest, under the name of Bodmin Consols; it is understood that a first-rate company have determined to give it a fair trial. A large water-wheel is now in course of erection, and in three or four weeks, will be ready for work, which, with the water-power available, will take them a considerable depth. A few men have been employed for some time past in driving an adit on the course of one of the lodes which have been opened on, and which is of the most promising appearance. It consists of a very fine gossan, prian, decomposed quartz, with no inconsiderable quantity of lead. We fully anticipate that all the prospects of the late adventurers, as well as those of the present company, will ere long be fully realised; and we feel confident, under the able and judicious superintendence of the present managers, and, with the capital at their command, it will make a first-rate mine.

Wheal Alfred, which, it is stated, previous to its abandonment, returned upwards of 250,000*l.* to the old adventurers, together with West Wheal Alfred, and Wheal Ann, near Hayle, we hear are about to be resumed; several capitalists connected with mining enterprise, being in treaty for the lease, with a view of working them on the Cost-book System.

BISHOPTON (SILVER-LEAD).—This company has succeeded in opening a very valuable and extensive tract of ground, about six miles to the west of Swansea, under the able and judicious management of Capt. Henry Francis. It appears that district was worked by the Romans, who, not having the means of working to any considerable depth, left the bottom rich in ore; and we have heard that a steam-engine is to be erected immediately.

PAR CONSOLS.—This flourishing mine is, we are gratified to state, in a still further improving condition. Though long known as one of the most productive mines of the county, at this present time the returns are more considerable, and it is richer than ever.

TYWARNHAYLE MINE.—The lodes in this mine are progressing favourably, and, should present prospects continue, there is no doubt they will be highly remunerative to the adventurers.

UNITED MINES.—These mines have presented, within the latter period, a marked amelioration, and may be considered to be in a very prosperous state.

WHEAL LANGFORD.—This sett went to work on Tuesday last—whether for gain or loss, time will show. The event created a great sensation, a number of miners and mining gentlemen being present, among whom were Messrs. J. Peters and W. West, Capts. Lean, Spargo, Hoskins, Penaluna, Knott, Carpenter, Williams, and Vivian, whose opinions bear out all that is said in the prospectus (so unfairly treated a fortnight since in the Journal); Mr. Langford pledged his honour (and to all who know him his word is sufficient) that since the agreement had been made for giving 500*l.* for the sett, he had been offered 1300*l.* in cash, and other privileges, equal to 2000*l.* for the sett.

WHEAL SARAH.—Since the report of this mine, which will be found in its place, was put in type, we have received information that the gossan, of which there is stated to be an enormous quantity, has been assayed by Mr. Longmaid, who reports it to contain 50 per cent. of lead, and 54 ozs. of silver to the ton of 21 cwts.—the produce of 7 tons of gossan. There is also a small portion of gold in the ore.

WHEAL SETON.—The improvements in this mine, noticed in our last, still continue; the yield for the two months is estimated to be about 1000 tons.

CARADON VALE MINE.—This mine, for re-working which a company is now forming, is situate in the parish of St. Ives, near Liskeard, Cornwall, in a valley in the vicinity of the rich mines of South Caradon and West Caradon, not far from the Granite Hills. It is proposed to divide the mine into 1536 shares, at 5s. per share as the first deposit, and it is expected not more than 1*l.* per share will be required to put the mine in a profitable state; 536 shares are reserved to the owner of the sett, and 250*l.* is to be paid for preliminary expenses. Several poor miners, some time since, set to work to ascertain the nature of the lodes, being satisfied they contained copper ore. They had sunk a winze 14 fms. under the adit, with the intention of cutting the lode, when they were suddenly overwhelmed by a rush of water from a cross-course, and, having only water barrels, were obliged to desist; enough, however, was seen to satisfy them that rich yellow and black copper ore existed. There are seven lodes in the sett, and it is generally believed, by experienced miners, to present features of the greatest interest, and that, if prosecuted with spirit, it will prove a most profitable undertaking.

ON THE ESTIMATION OF THE WEIGHT OF ANTIMONY.

Antimonious acid (oxide of antimony Sb+3O) may be estimated in a mode analogous to arsenious acid, by means of a solution of gold. This method requires, however, more precautions than the determination of arsenious acid. For, at the same time that gold is reduced, antimonic acid is separated, which, when it has once been precipitated, is very difficultly soluble in hydrochloric acid; this precipitation must, therefore, be prevented by the previous addition of a great excess of hydrochloric acid.

Separation of Antimony from Tin.—The author has already proposed a method for the separation of these two metals; this consists in eliminating the antimony in the form of antimoniate of soda by means of water, from a solution of tin in hydrate of soda. As, however, antimoniate of soda is not perfectly insoluble in water, this method does not give perfectly accurate results; a more precise one consists in the separation of antimoniate of soda from stannate of soda, by means of dilute alcohol. When an alloy of these two metals is to be separated, the first step to be taken is that of completely oxidizing both by nitric acid. The acids obtained, from which the nitric acid is to be expelled by gently heating them, are to be fused in a silver crucible with hydrate of soda. The fused mass is moistened with water, and then alcohol is to be added; dilute alcohol is to be used for washing the antimoniate of soda. The alcoholic solution of stannate of soda is exposed to a gentle heat to expel the greater part of the alcohol, then diluted with water, and saturated with dilute sulphuric acid, and lastly the tin is to be precipitated in the state of sulphuret, by means of hydrosulphuric acid, and then to be converted into oxide of tin. The antimoniate of soda is dissolved in a mixture of hydrochloric and tartaric acids, and the antimony is precipitated from the solution by hydrosulphuric acid gas, in the form of sulphuret of antimony.

Separation of Antimony from Tin and Arsenic.—The metals are oxidized by nitric acid, the oxidized mass is evaporated to dryness, and then fused in a silver crucible with hydrate of soda. The fused mass is diffused in water and treated with dilute alcohol. Antimoniate of soda remains, which does not dissolve, washed with dilute alcohol, and is afterwards dissolved n a mixture of hydrochloric and tartaric acids; from this solution the antimony is precipitated in the form of sulphuret by hydrosulphuric acid gas. It is hardly necessary to expel by heat the alcohol from the solution from which the antimoniate of soda has been separated; it is to be saturated with hydrochloric acid, and without filtering the arseniate of tin which is formed, a current of hydrosulphuric acid gas is to be passed into it.

Separation of Antimonious and Antimonic Acids.—These two acids may be quantitatively determined when they occur together in solution in hydrochloric acid, by a solution of gold. This solution of gold is a good substance for discovering the existence of antimonious acid in the presence of a great excess of antimonic acid; but solution of nitrate of silver is a still more sensible re-agent for discovering antimonious acid. If to a solution of antimonic acid in hydrate of potash, a solution of nitrate of silver be added, an intense black precipitate is obtained. This precipitate is not soluble in ammonia; but it takes this substance from oxide of silver which has been precipitated by an excess of solution of potash; when a solution of nitrate of silver is added to one of antimoniate of potash, a white precipitate of antimoniate of silver is obtained, with a yellowish tint. If the solution contains free potash, the precipitate of oxide of silver, simultaneously formed, is brown. The two precipitates are completely insoluble in ammonia. If, on the other hand, the solution contains but a small quantity of antimonious acid, there remains, when the precipitate is treated with ammonia, a black indissolvable precipitate.—M. H. ROSE: *L'Institut.*

GERMAN MINING COMPANY.—In the proceedings in this case, under the Winding-up Act, Mr. Malins moved, on behalf of some of the contributories, by way of appeal from an order made by the Master, which allowed a debt of 12,217*l.* 5s. to the London and Westminster Bank, out of the first moneys received. The company had been formed for working mines in any part of Germany; the 50,000*l.* capital was soon exhausted; and up to 1847 the directors had raised further money, by borrowing of this bank, upon the responsibility of the directors. No meeting was called to authorise the borrowing; but the shareholders were informed of it at the usual meetings, copies of the reports of which were circulated. The question was, whether the contributories or the individual directors were liable; and Mr. Malins argued that there was no implied authority in the directors to borrow money, and that the circumstances did not show acquiescence so as to bind the shareholders. His Honour thought the question one which could not be properly determined without the decision of a court of law, and directed the bank to bring an action against the official manager, the appellants to have the conduct of the defence. The fact of upwards of 60,000*l.* having been expended without any mining operations being carried out is rather startling; but, as no doubt full details will come out in the forthcoming action, we defer any further observations until we know the results.

ROCKS AND TREVERBYN UNITED MINES.—The people in the neighbourhood of these mines were highly gratified, on Monday last, in witnessing the success which attended the "going off" of the great fire stamps. This is the third engine erected by the spirited company since May last. The present engine drives 140 heads; it moved off without the least jarring, of the style in which it commenced raising its gigantic burthen could not be surpassed. The greatest credit is due to the young engineer, Mr. William Henry Gray (whose energies have been exerted to the utmost), for the skill which he has displayed in constructing this engine in so short a space of time, the style of which is not inferior to the best in the county. The dressing-floors attached reflect the highest credit on Captain Gripe, the manager, for the method in which he has combined the various improvements which have been made in tin dressing, and they are well worthy of being visited by all persons interested in this department. The labourers and mechanics were regaled on the occasion with old English fare.—*West Briton.*

Messrs. Horlock and Co., engineers, of Northfleet, have just completed the machinery of a trim little steam-schooner, destined for the service of the Channel Islands and France Steam Navigation Company. This light and elegant vessel is propelled by a pair of 20-horse engines, acting directly upon the propeller-shaft—thus dispensing with the use of any gear-wheels. Nearly the whole of the works is of malleable iron. Her fittings, which are in excellent taste, have been supplied by Messrs. Taylor, who equipped her Majesty's yatch, *Fairy*. She will form a valuable reinforcement to the means of rapid communication; and we hope soon to see more of her class employed in the service between England and her channel dependencies.—*Railway Times.*

RAILWAY TRAFFIC RETURNS.

Names of Railways.	*Length.* 1850	1849	Present actual cost.	Price p. share	Div. 1849	*Traffic Returns* 1850	1849
Aberdeen	57	16	1,000,547	12½ 12¾	—	£805	£390
Belfast and Ballymena	37½	37½	514,968	17½	5*	422	408
Birkenhead, Lancashire, & Chesh.	19	19	1,088,804	37	5†	760	583
Bolton, Blackburn, & West Yorksh.	14	—	786,384	5¾	—	405	357
Bristol and Exeter	85½	75½	2,660,490	64	—	—	—
Caledonian	160	141	5,149,320	11¾ ⅞	3	5720	3824
Chester and Holyhead	100	84	3,358,217	10	4	1283	1100
Dublin and Drogheda	35½	35½	778,565	27	—	655	679
Dublin and Kingstown	7¾	7¾	395,915	—	—	570	537
Dundee, Perth, & Aberdeen Junc.	50	47½	844,554	8¾ ⅝	6¾	1045	945
East Anglian (Lynn to Ely)	91½	67	1,247,446	1¾	—	739	698
East Lancashire	75½	24	2,628,519	10	5	2539	1949
Eastern Counties and Norfolk	322	295	12,027,069	7⅝ ¼	—	13287	13362
Eastern Union	95	50½	1,782,703	4¼	—	1849	1201
Edinburgh and Glasgow	57½	52½	2,923,199	27½	6	2378	3133
Edinburgh and Northern	78	34	2,241,276	7	2	1879	1608
Glasgow, Paisley, and Ayr	104	74	2,574,330	52½	3	2445	2355
Glasgow, Paisley, & Greenock	23	23	852,846	12½	2	869	899
Gt. Northern & East Lincolnshire	143	—	5,138,756	6½	5†	2531	1653
Gt. Southern & Western, Ireland	188½	110½	3,552,589	28¼ 9	6†	3616	3305
Great Western	230½	206½	11,867,042	67½ 62½	6½	12593	17670
Lancaster and Carlisle	90	70	1,476,102	51	4½	3175	2000
Lancashire and Yorkshire	220	127½	10,063,862	51 52	5½	10827	11072
Liverpool, Crosby, & Southport	13	—	84,455	5½	—	76	72
London and North Western	478	428	26,251,635	103½	7	38003	36712
London and Blackwall	5½	4	1,299,675	4½	1-12	599	619
London, Brighton, & South Coast	170	162½	6,502,600	80¾ 80½	2½	6427	6756
London and South-Western	221	194	7,874,259	65¼	5½	7210	7472
Londonderry and Enniskillen	14½	14½	185,739	16	—	121	—
Manchester, Sheffield, & Lincolnsh.	157½	94½	6,598,260	14¾ 15	5	4564	3112
Midland Company	483	423½	15,133,779	42⅝	5⅛†	19541	19319
Midland Great Western (Irish)	50	36½	725,332	24 3⅛ 3⅜	4†	904	1065
Monklands	36	—	486,245	—	6	—	—
North British	135	83	3,649,055	10¼ 10	4½	3081	2312
Scottish Central	45½	—	1,364,228	14⅝	7	1123	879
Shrewsbury and Chester	48	23	969,618	12½	5	1242	1374
Shropshire Union	30	—	—	3⅜ 3⅛	—	366	—
South Devon	57½	29	1,909,232	6	5	1510	1430
South-Eastern	189½	165½	8,666,007	19¼ 18⅝	5½	7608	6506
Taff Vale	38	40	879,110	—	7½	1511	1756
Ulster	36	36	723,829	45⅛	—	722	688
Waterford and Limerick	25	—	512,894	—	—	—	—
West Cornwall	13	—	—	—	—	276	216
Whitehaven Junction	12	12	150,879	9¼	3	202	—
York, Newcastle, & Berwick	290½	242½	6,827,849	15	7	12293	10985
York and North Midland	260	234	4,983,618	18¼	7	5930	6307

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 207 6
3 per Cent. Reduced Ann., 95⅞ ⅜
3 per Cent. Consols Ann., 95⅝ ⅜ ⅜
3½ per Cent. Ann., 99¼ 7⅛
Long Annuities, 8⅛
India Stock, 10¼ per Cent., 265 7½
3 per Cent. Consols for Acc. 95⅞ ⅜ ⅜
Exchcq. Bills, 1000*l.*, 1½d. 57 54 pm.

Belgian, 4½ per Cent., 99
Dutch, 2½ per Cent., 55 ½
Brazilian, 5 per Cent., 89
Chilian, 3 per Cent., —
Mexican 5 per Cent., ex Coup., 29½ ⅝
Russian, 5 per Cent., 110
Spanish, 5 per Cent, 18⅝
Ditto 3 per Cent., 36¼

MINES.—The mining share market still continues firm, with an active enquiry for leading mines, several of which have advanced considerably during the past week, with an insufficient supply at present quotations.

Devon Great Consols have again been done at an advance, and shares are not to be obtained but at higher prices.

South Basset, Condurrow, South Tolgus, South Frances, and Stray Park are among those in request at advanced rates.

East Tamar is represented to have improved. Caroline shaft has been cleared, and the lode found producing 10 cwts. of rich ore per fm., on the course of which they are now sinking. The south end, in the 60, is yielding 12 cwts. per fm.

Wheal Seton shares have been done. By the agent's report, presented at the meeting, we learn that the mine has considerably improved since the previous account, particularly in a winze under the 80, now producing 8 tons to the fm., and in Tilley's shaft, where the lode is yielding 6 tons per fm.

Several shares in Penzance Consols have changed hands, and, since the meeting of the 11th, some important discoveries have been made—a lode has been intersected with a bunch of tin, worth 50*l.* per fm.

At Wheal Trehane meeting, a dividend of 30s. per share was declared. The balance sheet shows a credit for Sept. and Oct. of 1018*l.* 10s. 11d.; from which the dividend of 384*l.* is to be deducted, and 300*l.* on account of the new steamwhim engine—leaving a balance of 334*l.* 18s. 11d. to next account. By the agent's report, we find the mine progressing in a highly satisfactory manner.

At the Stray Park, Camborne Vean, and Wheal Francis Mines' account, for four months ending Dec., 1849, a dividend of 15s. per share was made; the balance in hand (inclusive of 404*l.* 7s. last account) amounted to 1139*l.* 12s. 9d.; consequently a profit of 735*l.* 5s. 9d. has been realised during the above period of working, and a balance of 389*l.* 12s. 9d. carried to credit of next account. The agent's report of the mines is satisfactory—the deeper levels being more productive, and larger returns are fully expected. The next accounnt will be a bi-monthly, when a dividend of 10s will be declared for January and February.

Wheal Friendship declared the usual bi-monthly dividend of 120*l.* on Thursday last, being 10*l.* per share, payable at Messrs. John Taylor and Sons.

At Condurrow bi-monthly account, a dividend of 3*l.* per share was declared, leaving to credit of next account, 275*l.* 3s. 9d. The mine is represented as considerably improved since last account.

At Providence Mines bi-monthly meeting, a dividend of 6*l.* per share was declared, leaving a balance to next account, 191*l.* 13s. 10d.

At Tregorden bi-monthly meeting, the accounts showed balance against mine of 307*l.* 15s. 11d.; and a call of 30s. per share was made. The prospects of the mine are very encouraging.

At East Pool account for December and January, a balance of 87*l.* 16s. 9d. was found against the mine, which, added to the balance left on last account, gives 592*l.* 3s. 6d. The mine is represented as progressing highly satisfactorily, and likely to become dividend-paying before the end of the year.

At Budnick Consols account, for four months ending December, a balance of 208*l.* 5s. 3d. was found in favour of the mine, and carried to next account.

St. Ives Consols account, for Nov. and Dec., shows a profit of 93*l.* 6s. 2d., which, added to balance left from last account, gives 158*l.* 14s. 5d. in hand.

At the Pennant and Craigwen meeting, the report of the directors showed that the Craigwen Mine was now in a most promising condition, and it is expected, with efficient co-operation on the part of the shareholders, will shortly become a dividend-paying mine. It was recommended to dispose of or re-let the Pennant Mine. It appears that had the directors been better supported with funds, it is highly probable a dividend would have been paid ere this. There is a balance of funds in hand of 1005*l.* 11s. 8d.

At Esgair Llee meeting, a balance of 126*l.* 3s. was found in favour of the company; but in consequence of some considerable improvements, it was deemed necessary to make a call of 10s. per share, for erecting machinery.

At South Wales meeting, a call of 5s. per share was made. The balance in favour of the mines amounted to 198*l.* 15s. 8d.

At Wheal Vincent meeting, a call of 1*l.* per share was made, the present liabilities being about 814*l.*

At the East Wheal George meeting an estimate was read for putting the mine into full operation, supposing no returns were met with, for 600*l.*

At the Wheal Lawrence meeting there appeared a balance against the mine of about 130*l.*; 77 shares stood liable for forfeiture, and a call of 5s. per share was made.

Shares in the following mines have changed hands since our last:—Devon Great Consols, Wheal Seton, Trelawny, Condurrow, Tincroft, Stray Park, Penzance Consols, Pendarves, South Frances, Trehane, South Basset, Heignston Down, South and East Tamar, Mary Ann, East Gunnis Lake Junction, West Caradon, Cook's Kitchen, West Tolgus, Wheal Margaret, Treviskey and Barrier, East Buller, Treleigh, South Tolgus, &c.

In Foreign Mines a fair amount of business has been transacted—especially in United Mexican, Copiapo, National and Imperial Brazilian, Guadalcanal, and Linares.

Advices have been received from the National Brazilian Mines; the gold report for ten days is thus given:—

Cocaes, 4th to 13th December ..... *Mks.* 31 7 4 40
Cuiaba, 7th to 17th December ..... 1 6 0 19—33 5 4 59

The Linares weekly report has been received, which contains nothing detrimental to former expectations.

At the Copiapo meeting the directors' report showed the company's mining properties to be in a prosperous condition, although the quantity of ore raised has fallen off from shortness of labour. The 11 different silver mines lately purchased, with operations since, had cost 5500*l.*, and the returns already 6500*l.*, besides plata pina sold in Mexico, 850*l.* A new road had been discovered to the port, and everything was in a very promising state: 453 tons of copper ore have been sold, realising 10,158*l.*

The late accounts received by the United Mexican Association, which will be found in another column, are most encouraging as regards the good old Mine of Rayas, which, it must be remembered, has not only paid off the incumbrances of the association, but also, during the past five years, has enabled the directors to pay a dividend averaging 8s. per share per annum up to the 1st instant, as well as the manager in Mexico to enter upon new mines at an outlay of 11,200*l.*, or above another dividend of 5s. per share; and these new mines are, according to the last advices, likely soon to yield important returns to the company. In the Mine of Aldana, the indications are such as to have induced the manager to begin a cross-cut, in order to cut the vein. In Promontorio, the ore had not only increased in quantity, but proved to be of the same class as that of the famous Santo Toribio, in Rayas; consequently, extensive operations were about to commence to bring its resources into full activity; and the Mine of Jesus Maria, the last taken by the company, has an immediate neighbour, called Villarina, where a rich vein of ore has been cut within 10 varas of the main lode, and which had confirmed the company's manager in his opinion of Jesus Maria, and stimulated him to accelerate the sinking of the shaft. In fact, the present appearance of these undertakings would lead the practical miner to look forward to a rich harvest to reward his exertions.

HULL, THURSDAY.—The market for shares has been flat throughout the week. Local stock remains steady. Hull and Selby, old, 99*l.* to 10 *l.*; halves, 49*l.* 10s. to 50*l.* Flax and cotton mills, 115*l.* to 125*l.*; new quarters, 30s. premium—buyers taking the bonus of 2*l.* 10s. (equal to 20s. discount). Kingston cottons, 40*l.* discount; Hull Bank, 10*l.* 10s. to 10*l.* 15s., ex-div.; Cemetery, 20s. to 30s., discount.

MINING IN WALES.—The reports from the mines in Cardiganshire continue to be most encouraging. In several of the lead lodes good courses of ore have been cut. A large profit is likely to be made to the shareholders on the returns.

THE DUTY ON TIN.—We announced, in our last week's Journal, that a meeting of tin-plate manufacturers had been held in Bristol, on which occasion a memorial was adopted, to be forwarded to the Board of Trade, setting forth urgent reasons for the immediate repeal of the duty on foreign tin. A deputation from this meeting, consisting of Messrs. Booker, Hurley, Hancocks, Lewis, and Thomas Allaway, accompanied by Gen. Lygon, M.P., Mr. Muntz, M.P., Mr. Thornley, M.P., and Mr. Knight, M.P., on Thursday, the 21st inst., waited on the Right Hon. H. Labouchere, at the office of the Board of Trade. The deputation was most courteously received by the hon. gentleman, who expressed himself favourable to their views, with regard to a re consideration of the duty, previous to its repeal.

IRON TRADE IN FRANCE.—There have been lately several meetings of the leading ironmasters in the several districts, on the subject of the late amelioration of the tariff with respect to metals, machinery, &c. The object is to establish a current price of their own produce, which will enable them to compete with England and Belgium at remunerating terms. This move has been brought about by the large importations which are taking place from Belgium under the new arrangements with the railway companies, and large establishments using much coal. The modification of the tariff between England and France will be highly beneficial to the commercial interests of both countries.

WHEAL ANDERTON.—A general meeting of adventurers in this undertaking is to be held on the 28th inst., at which a detailed report will be laid before the shareholders, and it is understood that another call will be needed.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	9 ..	6
1024	Alfred Consols	8½ ..	15
1024	Arundell	2½ ..	—
1024	AshburtonUnited Mines	9½ ..	12
1024	Balleswidden	9 ..	16
126	Bainoon Consols	42½ ..	50
965	Barristown	5½ ..	4 5
3650	Bawden	¼ ..	¼ ⅜
6000	Bealbury	1 ..	1
4000	Bedford	5½ ..	5 5½
1280	Birch Tor & Vitifer	10½ ..	6½ 7
5000	Black Craig & Craigton	3 ..	5
8000	Blenavon	50 ..	10
5000	Blisland Consols	1 ..	4½
1024	Bodmin Consols	2 ..	2½
5000	Bonmin Moor Consols	1 ..	3
60	Bosorn	5½ ..	7½
100	Botallack	182 ..	30
120	Brewer	5 ..	2½
10000	British Iron, New, regis.	12 ..	8
—	Ditto ditto, scrip	10 ..	10
2400	Bryn-Arlan	2 ..	3
107	Budnick Consols	52½ ..	12
1000	Callington	22 ..	5
1000	Camborne Consols	7 ..	5
20000	Cameron's Steam Coal	7 ..	1
256	Caradon Mines	22½ ..	10
256	Caradon United	24 ..	5 8
256	Caradon Wh. Hooper	21 ..	4½
1000	Carn Brea	15 ..	115
1000	Carthew Consols	1½ ..	7
113	Charlestown	220 ..	—
500	Combiawn	5½ ..	4½
128	Comfort	45 ..	70
256	Condurrow	20 120	25 35
2560	Cook's Kitchen	14 ..	7⅞ 8
1000	Coombe Valley Quarry	5 ..	5
1000	Copper Bottom	7½ ..	—
900	Court Grange	9 ..	10
212	Craddock Moor	23½ ..	5
128	Creeg Braws	120 ..	30
500	Culvert Mine	12½ ..	—
1000	Cwm Erfin	4 ..	4 4½ 5
1000	Daren	2 ..	5
7100	Derwent	8½ ..	5
502	Devon&CourtenayCon.	114 ..	2½ 2½
1024	Devon Great Consols	1	210 220
1000	Dhurode	5 ..	5
182	Dolcoath	30 ..	20
2560	Drake Walls	5½ ..	2½ 2½
10000	Durham County Coal	45 ..	9
3000	Dyngwm	10 ..	15
1020	East Alvenney	2½ ..	5
2500	East Birch Tor	3 ..	3
1024	East Buller	1	5 5½ 5½
112	East Caradon	47 ..	47
2048	East Crowndale	7½ ..	1½
4000	East Gunnis Lake Junc.	½ ..	1
128	East Pool	15 ..	60 65
9000	East Tamar Consols	19¾ ..	1½ 1⅝
258	East Tolgus	1½ ..	4½
94	East Wheal Crofty	125 ..	65
128	East Wheal Rose	60 520	80 600
—	East of Scotland Iron Co.	5 ..	1⅛
123	East Wheal Seton	14 ..	10
1280	Esgair Llee	2 ..	4 5
248	Exmoor Wh. Eliza	11 ..	10 12
494	Fowey Consols	40 ..	45
1024	Freidd Llwydd Mines	1½ ..	3½
4000	Gen. Mining Co. for Irel.	1½ ..	1½
2500	Georgia Consols (Tin)	½ ..	1½
256	Gonamena	44½ ..	16
128	Goonvrea	4 ..	2
256	Grambler & St. Aubyn	80 ..	6
96	Great Consols	1000 ..	250
512	Gt. Wh. Rough Tor Con.	24½ ..	18 20
6000	Growa Slate Company	5 ..	5
1626	Gustavus Mines	3 ..	2½ 3 4
256	hawkmoor	12½ ..	70
6000	Heignston Down Con.	2½ ..	2½ 3
1500	Hennock Silver-Lead	18s ..	5 6
4500	Hennock Iron & Tin	21s ..	21s
512	Herodsfoot	10 ..	12½
10000	Hibernian	12½ ..	1⅞
1000	Holmbush	22 ..	13
1000	Keswick	10 ..	10
1024	Kingsett and Bedford	1½ ..	4 4½ 5
787	Kirkcudbrightshire	8½ ..	4 4½
2048	Lamlierooe Wh. Maria	9 ..	4½
252	Lanarth Consols	— ..	7
256	Lelant Consols	47 ..	25 26
160	Levant	— ..	150
1000	Lewis	17 ..	9½ 10
1000	Llwynmaleos	9 ..	10
3500	Llynvi Iron	50 ..	50
253	Lostwithiel Consols	23 ..	10
6000	Marke Valley	10 ..	⅜ 1
5000	Mendip Hills	3½ ..	3 3½
128	Metha	34 ..	—
20000	Mining Co. of Ireland	7 ..	5½
256	New East Crowndale	3½ ..	4½ 5
100	North Pool	45	500 510
140	North Roskear	5½ ..	150
262	North Wh. Leisure	1½ ..	2
16000	Northern Coal Co.	23 ..	2
128	Par Consols	55½ ..	650
1026	Pendarves Consols	2 ..	4 5 7
1248	Pengelly Tin	1 ..	1
8000	Pennant & Craigwen	2½ ..	3
1024	Penzance Consols	22	3d..5 5½ 6
512	Plymouth Wh. Yeoland	6½ ..	6
200	Polsalth Consols	5½ ..	4½
2500	Rhoswiddol&Bachceddon	10 ..	10
10000	Rhymney Iron	50 ..	13
10000	Ditto New	7 ..	6½
1000	Rosewall Hill	1 ..	5

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	Rosewarva Mines	— ..	12
2048	Runnaford Coombe Tin	1½ ..	4
9000	South Tamar	19 ..	3
128	South Caradon	5 ..	200
1400	South Dolcoath	5 ..	⅛ 1
256	Sth. Friendsh. Wh. And	30 ..	28 30
256	South Molton	7 ..	12 13
300	South Speed	5 ..	5
256	South Tolgus	10	135 140
256	South Treawny	28½ ..	8
2000	South Wales Mining Co.	1 ..	1½ 2
128	South Wheal Basset	20½ ..	540
124	South Wh. Frances	160 360	90 400
256	South Wh. Josiah	2 ..	3½ 4
1000	South Wh. Maria	2½ ..	1½
10000	Southern & Western, Irish	2½ ..	4
280	Spearne Moor	30 ..	40
94	St. Ives Consols	— ..	80
128	St. Michael Penkivel	5 ..	10½
999	St. Minver Consols	1 ..	6
1000	Stray Park	45 25	27 30
9600	Tamar Consols	3 ..	7 7½
10240	Tavistock Consols	½ ..	⅜ ⅝
1024	Tavy Consols	0½ ..	1½
6000	Tincroft	7 ..	12½ 13
58	Tokenbury	170 ..	10
240	Tolcarne	8 ..	15
256	Tregorden	3½ ..	7 8
256	Trehane	1½ 31	32 32½
5000	Treleigh Consols	6 ..	2½ 3
2000	Trenance	3 ..	—
1500	Trenault Lime Quarries	2 ..	3
96	Tresavean	10 ..	95
120	Trethellan	5 ..	23
120	Treviskey and Barrier	130 ..	190
512	Trethevy Copper	1 ..	1
1000	Tyllwyn	2 ..	2½
200	United Mines	50	100 150
256	Wellington Mines	25 ..	15
128	West Buller	10	445 450
256	West Caradon	20 ..	96
512	West Fowey Consols	40 ..	12
1024	West Far Consols	5 ..	—
2000	West Polgooth	5 ..	5
512	West Providence	9 ..	16½ 17
200	West Seton	45 ..	150
120	West Trethellan	5 ..	20
512	West Wheal Frances	1⅞ ..	8 8½ 9
256	West Wh. Friendship	9 ..	8
3845	West Wheal Jewel	12 ..	2½ 2¾ 3
256	West Wheal Tolgus	80 ..	10
256	West Wheal Treasury	27½ ..	12 13
1024	Whiddon Mines	4½ ..	2
5200	Wicklow Copper	5 ..	13⅜
107	Wheal Adams	130 ..	150
1000	Wheal Agar	— ..	6
256	Wheal Albert	10 ..	1
240	Wheal Anderton	28 ..	9 10
128	Wheal Ann	— ..	50½
512	Wheal Anna Maria	7 ..	4
120	Wheal Bal	5½ ..	10
256	Wheal Bemuy	14½ ..	2
1024	Wheal Bray	11½ ..	10
2324	Wheal Calstock	9 ..	20
2 8	Wheal Courtenay	20 .	23
182	Wheal Elizabeth	9 ..	12 14
256	Wheal Fortescue	15 ..	12 13
100	Wheal Friendly	70 ..	66⅜
388	Wheal Franco	27 ..	11 12
1000	Wheal Grose	3s ..	5½
100	Wheal Henry	— ..	35 37½
1024	Wheal Lawrence	3½ ..	3½
112	Wheal Margaret	79 ..	200
512	Wheal Mary Ann	5 ..	37½ 40
5000	Wheal May	¼ ..	⅛ ⅜
360	Wheal Oak	25½ ..	5
3000	Wheal Penhale	1½ ..	6
210	Wheal Prospect	4 ..	7
120	Wheal Reeth	41 ..	150
128	Wheal Rose	60 ..	3
198	Wheal Seton	107 ..	240 50
180	Wheal Sisters	35½ ..	5
512	Wheal Sophia	5½ ..	5
128	Wheal Spearne	10 ..	60
128	Wheal St. Ann	30 ..	35
550	Wheal Trescoll	10½ ..	10 12
260	Wheal Trelawny	7½ 85	90 95
256	Wh. Tremaine(St. Ervan)	9½ ..	2½
1024	Wheal Tremayne	9½ ..	7⅛ 8
267	Wheal Tryphena	40 ..	80
1000	Wheal Vincent	2½ ..	8
128	Wheal View (Perranz.)	1½ ..	1½
184	Wheal Vyvyan	— ..	60

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½ ..	2½ 2⅝
15000	Asturian Mining Co.	15 .	2½
20000	Australian	4 ..	5½ 6
6000	Barossa Range	1⅝ ..	1⅝ ⅞
10000	Brazilian Imperial	23	5½ 6 6½
12000	Cobre Copper Co.	40 ..	32
10000	Copiapo Mining Co.	14 ..	4 3½
20000	General Mining Ass'n.	20 .	13
4000	Guadalcanal	5 ..	1½ 1⅝
2000	Ditto Preferential	2½ ..	2½ 2⅝
5000	Kluzigthal Mining Ass.	2 ..	1½
5051	Mexican Company	5½ ..	—
20000	Mexican & SouthAmer.	8 ..	1 1½
5000	National Brazilian	30 ..	6½
104000	N. Brit. Australasian	1 ..	⅜
7000	Royal Santiago	10 ..	7⅞ 8
11000	St. John del Rey	15 ..	13⅝
43174	United Mexican	Av. 28½	6 6½ 6⅝
10,000	Worthing (S. A.)	2 ..	2½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, FEBRUARY 22, 1850.

ENGLISH IRON. *a* — *per ton.*

Bar, bolt, &square, London	£5 15—6 0
Nail rods	6 15 0
Hoops	7 15 0—8
Sheets (single)	8 15 0
Bars, at Cardiff & Newport	5 0—5 5
Refined metal, Wales*	3 5—3 10
Do. anthracite*	3 15 0
Pigs in Wales	3 5 0
Do. do. forge	2 15 0
Do., No. 1, Clyde ... *net cash*	2 6 0—2 7
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3 15 0
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0
Stirling's Patent in Glasgow	2 17—3 0
Toughened Pigs in Wales	3 10—3 15
Staffordshire bars, at the works	6 0 0
Pigs, in Staffordshire	3 5 0
Rails	5 5—5 7 6
Chairs	4 0 0

FOREIGN IRON. *b*

Swedish	12 0—12 10
CCND	—
PSI	—
Gourieff	—
Archangel	—

FOREIGN STEEL. *c*

Swedish keg	14 15 0
Ditto faggot	15 0 0

ENGLISH COPPER. *d*

Sheets, sheathing, & bolts, *p. lb.*	0 0 10
Tough cake ... *per ton*	88 10 0
Tile	£87 10 0
Old copper *e* ... *per lb.*	8½*d*
Yellow Metal Sheathing	8½*d*

FOREIGN COPPER. *f*

Russian	—

ENGLISH LEAD. *g*

Pig ... *per ton*	17 0—17 10
Sheet	17 15—18 0
Red lead	18 0 0
White ditto	23 0 0
Patent shot	19 0 0

FOREIGN LEAD. *h*

Spanish, in bond	15 10—16 0
American ditto	—

ENGLISH TIN. *i*

Block ... *per cwt.*	4 5 0
Bar	4 6 0
Refined	4 11 0

FOREIGN TIN *k*

Banca, H. C.	4 7 0
Ditto, for Export only	4 5 0
Straits	4 5 0

TIN-PLATES. *l*

IC Coke ... *per box*	1 8 6—1 9
IC Charcoal	1 13—1 14
IX ditto	1 18 0

SPELTER. *m*

Plates, warehoused ... *per ton*	16 15—17 0
Ditto, to arrive	16 5 0

ZINC. *n*

English sheet ... *per ton*	22 0 0
QUICKSILVER *o* ... *per lb.*	4*s.* 0*d.*

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.
* Cold-blast, free on board in Wales.

MANCHESTER, FEB 19.—Scotch pig-iron continues flat, and consumers, in hope of a further decline in prices, have been shy of buying to-day; the business actually transacted, as reported, has been very inconsiderable indeed; we quote good brands in the Clyde at 46s. to 46s. 6d., cash; and at Runcorn and Fleetwood 52s. 6d. to 53s. per ton. Manufactured iron remains in pretty steady demand.

GLASGOW, FEB. 21.—We have had an exceedingly quiet market in pig-iron this week There have been few transactions, and those at lower prices than our last quotation. The price may to-day be quoted at 46s. to 46s. 6d. for mixed numbers, cash.

BOMBAY, JAN. 16.—Dulness prevails in the metal market as well as all others, and a decline in the price of nearly all descriptions has taken place—sheet lead and sheet iron being the only exceptions, these having slightly improved; and Swedish bar and hoop have remained as last reported. With copper, the bazaar is overstocked, with no demand.

NEW YORK, FEB. 5.—Scotch pig-iron is held more firmly at $21 25c. to $21 50c. cash, per ton; English bars firm at $42 50c., six months. Tin-plates are quiet, but very firm, at $10 50c. for ⅌x. Zinc, 5½c. to 5¾c., six months, according to assortment. Lead in fair demand, at advancing prices; bar and sheet lead and lead pipe, 4¼c.; and shot, 5½c., cash.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the past week:—Gold bars to Dunkirk, 1200 ozs.—Silver coin to ditto, 70,000; ditto to Havre, 2430; ditto to Belgium, 1000; ditto bars to ditto, 9500; ditto to Havre, 3060.—Making the total gold, 1200 ozs.; silver, 85,990 ozs.

The vessel, *Octavia*, arrived from Islay and Arica, has brought from the latter place 8231 bags of copper ore, and 3332 bars of copper; the *Nile*, from Calcutta and the Cape, 3 boxes of specie; and the *Victory*, from Port Philip and Sydney, 2 boxes of gold dust addressed, and 2 boxes consigned to order. This is an important and interesting importation from that quarter.

WHEAL FRANCO.—A meeting is convened for the 2d March, to enter into the necessary arrangements for effectually working the Wheal Franco and Wheal Massey Mines as one undertaking, which must, we presume, involve the sinking of the present engine-shaft, some 15 or 20 fms. under the 62. If this be done, it is the general opinion of miners that this will prove a valuable concern. We do not think it advisable to report on the mine, unless any very important discovery be made previously to the general meeting

LEAD ORES.

Ticketings at the King's Head Hotel, Holywell, February 21.

Mine.	*Tons.*	*Price per Ton.*	*Purchaser.*
Pen-yr-henblas	40	£12 1 0	Walker, Parker, & Co.
ditto	40	12 3 0	J. P. Eyton.
Westminster	35	11 18 0	Walker, Parker, & Co.
Jamaica	70	11 11 0	Mather & Co.
Belgrave	35	12 2 0	Walker, Parker, & Co.
Maesysafn	25	12 0 0	ditto
ditto	25	12 0 0	Newton, Keates, & Co.
ditto	50	12 3 0	Walker, Parker, & Co.
Pant Ddu	5½	11 5 0	ditto
Milwr	23	13 5 0	Newton, Keates, & Co.
Pantyffrith	50	13 0 0	Walker, Parker, & Co.
Total tons	398½		

Sold at the Mine.

East Wheal Rose	63	£14 11 6	R. Michell & Son.
ditto	48	14 8 6	ditto
ditto	45	14 5 6	Walker, Parker, & Co.

Sold at Liskeard.

Wheal Mary Ann	90	£18 4 6	T. Somers.

Sold at Aberystwith, Feb. 18.

Frongoch	70	£11 18 0	Walker, Parker, & Co.

Sold in London.

South Tamar Consols	70	£17 10 6	Tamar Smelting Co.
Newtonards	15	13 10 0	J. Taylor & Son.
ditto	35	10 1 0	ditto

COPPER ORES.

Sampled Feb. 6, and Sold at Andrew's Hotel, Redruth, Feb. 21.

Mines.	*Tons.*	*Price.*
Devon Gt. Cons.	104	£6 11 6
Wh. Josiah		
ditto	92	8 5 0
ditto	74	6 14 0
ditto	53	10 11 6
Wh. Fanny	106	5 5 6
ditto	97	5 0 6
ditto	96	5 5 0
ditto	93	5 14 0
ditto	87	8 1 6
ditto	82	6 5 6
ditto	69	5 17 6
Wh. Maria	102	10 14 0
ditto	45	11 0 6
Wh. Anna Maria	94	8 11 0
ditto	51	8 13 6
ditto	39	5 2 6
ditto	36	5 13 6
West Caradon	68	8 1 6
ditto	65	12 11 6
ditto	62	7 13 6
ditto	52	8 2 6
West Caradon	39	£4 12 6
Wh. Basset	54	1 19 0
ditto	63	6 17 0
ditto	59	15 9 0
ditto	49	3 5 0
Fowey Consols	89	7 19 0
ditto	84	7 1 6
ditto	56	5 4 6
Marke Valley	90	3 3 6
ditto	85	3 4 6
ditto	18	3 3 0
Wh. Friendship	82	10 1 6
ditto	51	8 6 0
ditto	26	5 15 0
Bedford United	115	8 14 0
West Wh. Jewel	70	5 10 6
Holmbush	56	4 15 6
Phœnix Mines	51	9 6
Wh. Pink	49	5 0 6
Gonamena	33	9 10 0
East Downs	10	5 3 0

TOTAL PRODUCE.

Devon Gt. Cons.				Wh. Friendship	159	£1398	19	0
Wh. Josiah				Bedford United	115	1000	10	0
Wh. Maria	1320	£9440	0	6	West Wh. Jewel	70	386	15	0
Wh. Fanny					Holmbush	56	267	8	0
Wh. Anna Maria					Phœnix Mines	51	891	4	6
West Caradon	286	2445	4	0	Wh. Pink	49	246	4	6
Wh. Basset	235	1627	3	0	Gonomena	33	313	10	0
Fowey Consols	229	1594	9	0	East Downs	10	51	10	0
Marke Valley	193	616	11	6					

Average Standard ..... £107 5 0 | Average Produce 9½
Average Price per ton £7 5 6
Quantity of Ore ..... 2806 tons | Quantity of Fine Copper, 261 tons 1 cwts.
Amount of Money £20,279 9 0
LAST SALE.—Average Standard ..... £110 6 0.—Average Produce 8½
Standard of corresponding sale last month, 102*l.* 2s.—Produce, 10.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	166	£890 15 0
Vivian and Sons	730	4870 2 6
Freeman and Co.	602	3983 16 3
Grenfell and Sons	337	2479 13 0
Sims, Willyams, and Co.	497	4202 7 0
Williams, Foster, and Co.	320	2791 19 9
Schneider and Co.	154	1060 15 6
Total tons	2806	£20,279 9 0

Copper ores for sale on Thursday next, at Lenderyou's Hotel, Truro.—United Mines 1509—Wheal Comfort 423—South Caradon 304—Par Consols 258—Treleigh Consols 165—Tresavean 97—West Trethellan 36—Penpoli Regulus 36—Richards's Ore 16—Wheal Andrew 2.—Total, 2846 tons.

Copper ores for sale on Thursday week, at White's Hotel, Pool.—Mines and Parcels.—North Roskear 820—North Pool 632—Consolidated Mines 585—Tincroft 526—Wheal Seton 440—South Wheal Frances 240—Fowey Consols 227—Wheal Basset 141—Wh. Henry 114—South Roskear 72—Wheal Clifford 36—Wheal Vyvyan 33—Pembroke 3.—3869 tons.

COPPER ORES

Sampled Jan. 30, and Sold at Swansea, Feb. 21, 1850.

Mines.	Tons.	Prod.	Price.
Berehaven	116	10⅝	£ 8 12 6

NOTICES TO CORRESPONDENTS.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

"A. B."—Royalties in copper and lead mines vary considerably—from 1-15th to as high as 1-12th dues, according to circumstances, work done, prospects, &c., or a more liberal desire on the part of the owner to encourage mining industry, or more anxious to increase his own gains; the former feeling generally produces the latter result, and *vice versa*. There is rarely, if ever, any reserve rent, as in collieries.—Consult Watson's *Compendium of British Mining*, published by Weale, High Holborn, and re-published, with additions, in the *Mining Journal* during the past year.

"An Adventurer" (Redruth).—Budge's *Miners' Guide* (Longman); Mitchell's *Manual of Practical Assaying* (Baillière); and *Glossary of Mining and Smelting Terms* (*Mining Journal* Office).

"W. N." (Old Broad-street).—The quotation of 4¾ to 5¾, for Imperial Brazilian shares, in last week's Journal, was furnished us by a broker, whose name can be obtained at our office.

ALFRED CONSOLS MINES.—*Errata*: In the report from the agent of these mines, in last week's Journal, a material error occurred. The tribute pitch over the 60 fm. level, east of the engine-shaft, instead of being set to four men at 10s. and 5s. in 20s., should have been, half a farthing in 20s. In order that the men should make wages, they were told that on raising 10 tons of ore they should, for the remainder, receive the agent's price—viz.: 2s. 9d. in 20s.

EXTENT OF THE UNITED STATES.—It has been computed that the United States have a frontier line of 10,750 miles, a sea coast of 5430 miles, and a lake coast of 1170 miles. One of its rivers is twice as long as the Danube, the largest river in Europe. The Ohio is 600 miles longer than the Rhine, and the noble Hudson has a navigation in the "empire state" 120 miles longer than the Thames. Within Louisiana are bayous and creeks almost unknown, that would shame, by comparison, the Tiber or Seine. The State of Virginia is alone one-third larger than England. The State of Ohio contains 3000 square miles more than Scotland. The harbour of New York receives the vessels that navigate rivers, canals, and lakes to the extent of 3000 miles, equal to the distance from America to Europe. From the capital of Maine to the "crescent city" is 200 miles further than from London to Constantinople, a route that would cross England, Belgium, a part of Prussia, Germany, Austria, and Turkey.

"An Inventor" (Peterborough).—Apply to Mr. Campin, of the Patent Office, 210, Strand, who will forward an official circular of information on matters connected with patents, and registrations of design, with scale of charges, &c.

"T. R." (Pool).—Address the secretary of the company, who will, doubtless, remedy the evil complained of.

"G. F. M." (Newcastle).—The meeting of tin-plate workers, to petition the Board of Trade to advise the repeal of the duty on foreign tin, was held in Bristol. Some further particulars appear in another column.

"Godwin" (Kent).—The lighthouse which was erecting on the Bishop's Rock, off Scilly, and which was totally destroyed during the terrific gale of the 5th inst., on the following morning not a trace of it being visible, was formed of cast-iron columns, stayed and bound together with wrought-iron rods. A model of one of a similar construction may be seen in the model room at the Society of Arts. It was to have been 120 feet high—20 ft. higher than the Eddystone. Bishop's Rock is the most westernly of the whole Scilly Isles, and is about 36 miles from the Land's End.

T. H. Castleton (Derbyshire).—The fodder of lead differs in weight by a few cwts. in three different parts of England—Cumberland, Hull, and Derbyshire. We have no means conveniently at hand of analysing the several fractional parts, but they range from 21½ to 22 cwts., which, at the price quoted by our correspondent, will, he will find, about range with our quotations per ton, in last and this week's Journal.

BRYNMAWR—RAILWAY COMMUNICATION.—A correspondent writes: "I should be glad to know when it is likely we shall have the opening of the line to Nantyglo, with stations, &c., like most other parts of the country, to take us to Newport, &c. It is quite out of the question that we, at least 20,000 inhabitants of Brynmawr, Nantyglo, and the adjoining works (one of the largest works in Wales), are deprived of any road to Newport, when the tramroad comes up from Newport to Nantyglo, 22 miles, which is now called the 'Western Valley Line.' Capt. Symons has stopped all passengers from going by engines, and now we are in a fix. Our parish roads are miserable—not passable for any kind of carriages; and if we go to Newport at all, our shipping port, it must be by a circuitous route of nearly 30 miles through Abergavenny. We pay more for carriage of goods to Brynmawr by five shillings each ton from Newport, than the price of freight from Newport to London, with our own vessels, and three times as much as from Newport to Cork."

The communication of "R. W." (Tavistock), is declined. The forthcoming meeting of Wheal Anderton will afford Capt. Carpenter an opportunity of answering any objections which may be raised to his management, and at which his detractors would do better to attend, and there state openly their charges, than writing anonymous letters.

"A Miner."—We have received the communication, reiterating all Capt. M. Francis's remarks in last week's Journal, on the visit of Mr. Evan Hopkins to Cardiganshire. The writer had hoped that Capt. Francis would have gone further, and explained Mr. Hopkins's views, as expressed to him, on the filling of metalliferous veins, as also his own; and "A Miner" still trusts that Capt. Francis will yet, as also Mr. Hopkins, favour our readers with further communications on this interesting subject, in an early Number of our Journal.

"N. E." (Washford, Taunton).—While we give our correspondent credit for the best intentions in his suggestions, we must inform him they are quite impracticabel. Our tabular matter is already sufficiently large; and inserting the names of the parish in which every mine in our list is situate, would double the amount of space taken up, to the exclusion of more valuable matter, without any corresponding advantages; for we are free to confess we do not see the necessity for it, to which "N. E." seems to attach so much importance. As to the suggestion about politics and agriculture, we can only say that the subjects to which the *Mining Journal* is already devoted, are of sufficient interest to employ all our energies to do them justice, and of too much importance to be neglected by the introduction of other topics, already so well attended to in other papers.

"A Late Adventurer in Wheal Vincent" returns his thanks to Mr. Evan Hopkins, for his observations on Capt. Spargo's report on Bodmin Consols Mine. He says it is doing him the justice that has been for many years due to him. He has been known in his own neighbourhood above 20 years, and the writer states not a week passes but he hears Capt. Spargo's name honourably mentioned, as to valuable practical experience, as well as theoretical judgment. The writer says that he saw him before he went to inspect Bodmin Consols, and he expressed a fear that it would not meet his approbation, and would rather he had not been selected for the purpose. To his great surprise, however, he found the strata totally different to what he had anticipitated it would be, and, of course, reported accordingly.

"E. M." (d'Ougree).—"On the application to Useful Purposes of the Lost Gases of Blast Furnaces" shall be inserted in next Journal. We always give such engravings as may be necessary to illustrate the papers of correspondents.

Mr. Campin's letter "On the Patent Laws and Treaties of Commerce," and Mr. Negretti, "On the Barometer," are postponed.

"Spectator" (Treruffe).—We can appreciate the intentions of our correspondent, which we have no doubt are to protect the labouring miner, in securing to him the use of a *real safety-fuse*. We do not, however, think the way in which he makes direct charges against managers of certain mines, whom he names not, the best way to forward his views. We must, therefore, decline his communication, for, were we to insert it, it would most probably bring about another of those personal contests which it is our wish to avoid.

"A. W." (near Stourbridge).—Mr. S. B. Rogers's "Data for Blast-Furnace Managers" has never been published, except in the *Mining Journal*. For a Daniell's battery, we should recommend Messrs. Knight, Foster-lane, Cheapside, or Button, Holborn-hill, London. The price depends on size and quality. For the cause of black or other cinder in iron, consult the letters of practical correspondents which have lately appeared so continually in our paper on the subject.

DEVON GREAT CONSOLS.—In our next Journal we shall publish a detailed description of these celebrated copper mines, with plans of the works, &c.

FRENCH COAL-FIELD.—We shall also publish, in an early Journal, a paper on this subject, which is being prepared by an intelligent correspondent, who has recently been on a visit to France, for the purpose of obtaining information.

*** It is particularly requested that all communications may be addressed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, FEBRUARY 23, 1850.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

Among other instances of improvement in mining produce, and in the metals particularly, our readers will not have failed to notice the change in the quotations for tin which have been now for some months running on in the same direction, until the improvement from the end of October last to the end of January amounts to 50s. per ton. For our own parts, we are most happy to know that the price of this ancient staple of the west of England mines is at a price which will fairly remunerate all who are engaged in raising it. We hope the present figure at which it stands in the market may be maintained, and that the customers who send for it will continue to send more frequently and more largely. But it would be, in every sense, a pity if, obtaining, as now we do, a remunerative price for the article, by a little excess of cupidity we should continue by any means to force the price up beyond what we really require, in order that we may see our own again with tolerable interest, and so high as that point which may tempt the foreigner to suspend his orders, or to find a more reasonable market.

Our friends will, we are persuaded, excuse us when we make this suggestion, which is level with their own eventual interests, and the character of fair traders. In general, the business of the week has been running on in the same course, and carrying in its bosom the same description of fruits as its several predecessors. Contentment, we believe, is the prevalent feeling in all our great business circles; and although the funds have gone down a point or two, in consequence of some warlike embers which are not yet quite quenched in some parts of Europe, the fullness of the money-market has suffered no appreciable abatement, and the firmness and buoyancy of the markets, in all mining produce, is assuming, week after week, a more confirmed and established character.

In another column will be found a communication from Mr. J. RICHARDSON, C.E., of Neath, on coroner's inquests on deaths in mines, following up one on the same subject in our last week's Journal, as also another from "N." (Durham), both of which are well deserving attention. Among the numerous arguments assigned for the necessity of Government interference in the working of coal mines, or on the various circumstances attending the numerous calamities following all explosions, by which they are surrounded, there is not one on this important point—the irresponsibility of these officials. Not even in the report of the commissioners (a portion of which we are continuing in each number) is any evidence given or sought for as to the facilities given for obtaining evidence, to the general impression whether juries showed a deep anxiety and a full determination to arrive at the real cause of the catastrophe, or whether, from the alarming frequency of such accidents, their deplorably fatal results, and the consequent repeated performance of the same duty, it does not become mere common-place inquiry, and a verdict of "Accidental death" returned, as a matter of course, in all cases; when, if a really searching investigation was made, it would be found that in a vast number of cases, at least, there was something far worse than what these accidents are generally attributed to—the recklessness of the men; and that it might be often traced to acts, or omissions, to which the agents, managers, or owners were the parties on whom the responsibility rested. We did intend to have made some remarks on the explosion at the Dudley Wood pit (described in our last); but as our correspondent "N." has alluded to the most important points, and hoping, with him, that we shall have a full elucidation from Mr. BLACKWELL at the inquest on the bodies, we defer them until our next number.

In our last Number we stated, on what we deemed good "authority," that the Indians who had possessed themselves of the property held by the QUEBEC MINING COMPANY, had returned to their location, or were on the point of doing so, but that the Government had declined to afford them the means of so doing, under which circumstances a private subscription had been opened. We have within the past few days been favoured with some *private* correspondence on the subject, the *public* facts therein referred to justifying us in setting the matter right, or rather putting the two reports or statements before the public. It would appear that the troops sent for the protection of the property, and to displace the Indians, did not, after all, reach Mica Bay, although they got within eight miles of it, being driven back by a violent storm, after lying two days at Whitefish Point. This, to a certain extent, might have been deemed by the parties interested unfortunate, but we cannot deem it otherwise than most opportune, as it prevented that loss of life which probably might have arisen, while, we believe, the civil authorities have effected the object—that of preserving the property, and placed the question on such a footing, that justice will be fairly meted out. The Indians, we are given to understand by the advices now before us, have returned to the Saut, having given bail to appear in May, or when called upon to answer any charge which may be preferred against them, which, we trust, may be avoided—even justice being dealt out to them and the company by the Government, whose question it really is, and who by some parties are censured for not having met the claims, and made a final settlement for their territory, before they allowed capital to be embarked in exploring the mines, which object is in itself one the most desirable, as calculated to advance the interests of the locality. It will be in the recollection of our readers, that Capt. O. H. MATTHEWS, who is the resident agent at the mines, lately visited England on subject of some other property which had been secured in the vicinity, and previous to whose departure from the mines a handsome piece of plate was presented to him, or rather a subscription entered into for that purpose, and whose return was hastened from the attack made on the part of the Indians, not as opposed to the company, but the Government, the former being the passive instruments of injury.

We are well pleased to find that the Indians have throughout expressed their readiness and anxiety to come to fair terms with the Government; and we think it behoves the latter not only to do justice, and fulfil their engagements, but moreover to protect the life, the interests, and the property of the settler. It is now understood, we believe, on representations made to the Government, that everything will be brought to a satisfactory and final settlement; and we have reason to believe that a gentleman, in whom every confidence may be placed by the Government, and who moreover enjoys that of the Indians, will be deputed early this spring to settle the points in dispute. The Indians, as we are *now* informed, being anxious to return to their destitute families, and having assented to the proposition of an amicable arrangement being entered into, *were supplied with the means of so doing by the Government*, and left on the 14th Jan., expressing their satisfaction.

The Government having appointed a commissioner, and, indeed, assented to the terms, with the conviction, on the part of the Indians, that they will now be fairly dealt with, little or no fear exists as to further trouble during the winter, or hereafter. It is, we understand, intended to resume operations, to a limited extent, until all matters be settled, and that the Government has fulfilled its obligations to the Indians, and to the company, for the losses and injury they have sustained, not only from the partial destruction of the works, but the suspension of operations, which, from their extent and prospects, held out every expectation of considerable profits, and to which we have already adverted on more than one occasion in our columns.

While we regret the circumstance, we hope it will have the beneficial effect of preventing a recurrence in other climes, where property may have been acquired under similar circumstances.

To those of our readers in the least degree interested in the completion of the new docks at Swansea, the result of a great meeting of the burgesses, rate-payers, owners of property, and others, who must be benefitted by the prosperity of the town, which was held in the Guildhall, on Thursday, the 14th inst., will be highly gratifying. It will be remembered, that a company for the construction of docks at Swansea was formed some years since; but in consequence of the sudden depreciation in railway and other public undertakings, they could only raise 36,000*l.* as available capital. The operations were thus at a stand-still, until within the past year the Corporation have been induced to take up the matter, and there is a bill now before Parliament to enable the Corporation of Swansea to advance 20,000*l.* to the docks, taking the amount in shares, and thus, of course, becoming participators in any actual profit which may arise for division, as well as in the great and general good which the town and neighbourhood must receive on their completion, and the floating accommodation which will be afforded for the increasing shipping trade of the port. The meeting was, with the exception of a few varieties of opinion as to details, nearly unanimous, and the best feelings of cordiality and confidence in the measure now before Parliament prevailed. The meeting was held for the purpose of advancing this bill through Parliament; and the resolutions passed were to the effect, that the meeting was fully alive to the importance of extensive floating accommodation being provided in the port, and were of opinion that the most active measures should be adopted for obtaining sufficient capital in order to proceed with the docks. That their construction would tend in the highest degree to improve the value of public and private property, and that it was to the interest of the Corporation to assist the measure by every means in its power; it trusted the efforts hitherto made would be continued to a successful issue, and that the council be solicited to carry through Parliament the measure they have introduced. The proprietors of mineral and other property were earnestly requested to co-operate with those who were anxiously forwarding an undertaking in which they are so vitally interested, by which they will secure the advantages of enlarged exportation, and by which "the best port in the channel" will be able to afford facilities for its rapidly increasing demand. A committee was formed for the purpose of canvassing the town, with a view to obtain additional shareholders. This committee commenced active business on Monday last, and a success beyond their most sanguine anticipations attended their first day's operations—200 additional shares having been taken in a canvas of about three hours. We heartily congratulate the good folks of Swansea on this reanimated feeling in behalf of the docks; and now that confidence is restored among the shareholders, the directors have decided not to commence until 80,000*l.* is subscribed for; and as they will in future be backed by the power of the Corporation, and the interest of every tradesman in the town awake to his own welfare, there are good grounds for hope that the construction of the docks will be carried out to a successful issue.

We are so often called upon to complain of the disgracefully insecure character of the patent laws of Britain, and of the wide field of encouragement they afford to the fraudulent usurpation of the rights of others, by the piratical robbers, with which this country is infested, who are ever on the look out for prey, that it is sickening to have to refer to the subject. We cannot, however, pass over a case of appeal from a decision of VICE-CHANCELLOR KNIGHT BRUCE, which came before the LORD CHANCELLOR on Saturday, and was concluded on Monday last. It was one to which we have often referred with pain, that of HUTCHISON *v.* TEYCHENNE, believing the plaintiff to have been for years deprived of the advantages of working a patent, which every man or *child* of common sense must see is his own indefeasible right, subject to all the horrors of suspense, by the captious pertinacity of defendant, and the absurd delays and obstacles thrown in the way of a just decision by the cumbrous machinery of that *incubus* on the energies of the country called *law*, but which, in fact, is anything but *justice*. It will be remembered, that on the part of the plaintiff the object of the suit was to have the benefit of an invention by a Frenchman, named LE GOUX, of Bayeux, Normandy, for infiltrating soft stone with substances so as to harden it, render it impervious to water, and more fit for building purposes. LE GOUX sold the benefit of the invention in England to TEYCHENNE for a sum of 16,000 fr., which, however, was not paid at the stipulated time. After waiting to give TEYCHENNE an opportunity of borrowing the money, LE GOUX sold the invention to the plaintiff for 1000*l.* After the purchase-money had been paid, the plaintiff discovered that TEYCHENNE had taken out a patent in London in respect of the invention, and accordingly instituted the present suit to set aside the transaction, on the ground of a fraudulent breach of confidence, and to have the patent assigned to him. The VICE-CHANCELLOR made a decree generally in favour of the plaintiff, for the interest originally held by LE GOUX, but directed the Master to make some further inquiries of LE GOUX, *viva voce*, as to whether TEYCHENNE really held any, and what, interest in the invention, having by non-payment entirely forfeited all claim. To this the defendant appealed, and the LORD CHANCELLOR in summarily dismissing the appeal, with costs, said—"The point reserved by the Court below was merely to ascertain if there were any grounds on which defendant could claim any interest; this could not prejudice defendant, it was the one in dispute, which his Honour thought he could not decide without further evidence, and his lordship was of the same opinion as the VICE-CHANCELLOR. If the case had come before him in the first instance, he should have made a precisely similar order, and, therefore, the appeal must be dismissed with costs."

Thus at present stands the case; but as the defendant has not brought the evidence to do which he had the chance before the master, he reports the case back to KNIGHT BRUCE the same as when referred to him. His Honour's decree must, therefore, we presume, immediately be for the defendant, to assign the patent to plaintiff, with costs. In the meantime, he has spent four years of the prime of his life in useless exertions to work the patent, subjected to the loss of many thousand pounds sterling, and that number of years of the period of the patent right expired; and a harrassing system of oppression pursued by defendant's solicitors in his name, himself being penniless, which would have ruined many a man under similar circumstances, and borne him to the grave. Numerous capitalists have been waiting around him ready to join in the carrying out the patent in an extensive manner, but have naturally held back until the "glorious uncertainty of the law" resolved itself into something like certainty. It is a case most remarkably conclusive of the injurious and unjust effects of the working of the patent laws.

The increasing intellect of the age, which in the last half century has made such gigantic strides, and the rapid progress of practical scientific development which has followed in its train, require continually enlarged means of extending the knowledge thus obtained, and for the benefit of society at large, giving greater facilities for acquiring it to the artizan, the mechanic, the student, and to all who, possessing minds above the generally enervating and uninstructive amusements to which our ancesters were devoted, are desirous of having unfolded to their views the hidden laws of Nature, the properties of matter, and to apply them for the advancement and happiness of mankind at large. Those who have lived during the past eventful half century remember the time when mechanics' institutions and public scientific establishments were things unknown to the multitude, and which existed only in the philanthropic and fertile imaginations of some few sanguine men of science, anxious for the emancipation from the darkness of ignorance of the rising generation, and who, by unwearying perseverance, succeeded in carrying out the principle. Once established, they spread with inconceivable rapidity, and now scarce a town in the United Kingdom, or a village of moderate pretensions, but possesses its mechanics', scientific, or literary institutions, or, at least, its public reading-room. In this great metropolis these establishments abound; in addition to which, we have our Polytechnic Institution, the Society of Arts, and other like scientific institutions, where much instructive knowledge is always to be obtained. Something more, however, yet remains to be done before provision is made for scientific recreation and instruction, commensurate with the wants of this great community; and we hail with gratification the issue of a prospectus, in which proposals are made for meeting the exigency thus existing, and to open to the metropolitan public a first-class establishment—not only free from objection, but fraught with intellectual, moral, and social tendencies—the great objects of the promoters of the ROYAL PANOPTICON OF SCIENCE AND ART. In this establishment will be introduced daily to the public lectures, demonstrations, and practical illustrations of all the various manufacturing processes; and as it is found that the funds of mechanical, and other scientific bodies, are seldom sufficient to enable them to procure the apparatus and appurtenances proper for the illustration of these lectures, and that such lectures are, in a great measure, consequently devoid of interest, for want of the necessary experimental elucidation, it is proposed to form a large collection of apparatus, suitable to the illustration of lectures in every branch of natural and experimental science; such apparatus to be lent out on hire upon very moderate terms. Its present promoters and patrons are among the noble and wealthy of the land, its council are gentlemen well known in the scientific world, and the promise of further powerful co-operation has already been received from men of science and manufactures. It will offer advantages not possessed by any institution now in existence, combining the chief features of a public exhibition with a private society, and present a constant and rational source of enjoyment to its members, and the means of instruction and recreation to the public. The galleries will be furnished with working models of machinery, and specimens of manufactures and the fine arts. One leading object is to obtain a complete series of the products of every staple manufacture in its successive processes, so as to create a national museum of the industrial arts, presenting to the visitor, at a single glance, a complete history of the most interesting and important arts of life. The laboratory will have more than a nominal existence; it will form a working department, in which every description of chemical operation may be carried on, and means supplied for teaching the various branches of chemical science on moderate terms. In connection with the laboratory and engineering departments, instruction will be afforded in the principles of mining, geology, and those of some of the most important branches of national and foreign manufacturing processes. One most important feature—and which, if carried out, will supply a want much felt in the metropolis—is the establishment of a separate department for teaching mechanical engineering, under the superintendence of a practical engineer—many young men, especially emigrants, being at present totally debarred from obtaining the least practical information, owing to the expense and time necessary to obtain it in private establishments. This department will be furnished with a powerful steam-engine, planing,

punching, and other engines, forming a complete plant of engineers' tools, with a select library of scientific books and drawings. Inventors will find in this department the means of cheaply testing the value of their inventions—a most desirable object.

The site secured for the Royal Panopticon is admirably adapted for such purpose, in the most central and public neighbourhood probably in the metropolis, being in Exeter-street, facing the Strand, with one frontage to Southampton-street, and another in Tavistock-street. A Royal Charter of Incorporation has been obtained; the capital is 80,000*l.*, with power to increase to 100,000*l.*, in shares of 10*l.* each, and every circumstance connected with the proposal appears to afford a hope that the institution will meet with complete success. If carried out with the spirit of liberality breathed in the prospectus, we have no hesitation in saying it might be made to prove one of the most important national establishments which the world can boast.

THE BANWEN IRON COMPANY—WINDING-UP.

The shareholders having received due notice that the Master who had charge of the winding-up of this company would proceed, on the 22d inst., to settle the list of contributories; a considerable number were in attendance, all of whom had various grounds for objecting to be placed on the list.

The MASTER directed his clerk to call over the names first of those who did not object, but there being none such present, the names of the belligerents were referred to. The first who appeared to "show fight" was Dr. BARNETT, who was represented by the deed as a holder of 500 shares. He said he would state his own case, which was as follows:—When he signed the deed on the 1st Oct., 1845, he did so as subscribing for 500 shares, but on the distinct understanding with the provisional directors and solicitor that he was to take that number between himself and his friends. He then was under the impression that those friends of his, with whom he was to divide those 500 shares, would sign the deed as well as himself, and he had arranged to take 100 shares himself, and the other 400 should be divided amongst his friends. This was considered by the board as a satisfactory arrangement, and he paid some money on account of those 100 shares, and some of his friends had paid on 100 of the shares they had taken; and a gentleman named Mr. Fullerton was one of those who had taken a portion of the said 500 shares, and he had signed the deed; but he (Dr. Barnett) always understood that the transfer of those shares was to be made by him to them, not by the directors. However, instead of that having been done, the directors had transferred to those parties, and the consequence would be, that if such an act would be held valid, he (Dr. Barnett) would, in fact, be responsible for 500 shares, instead of 100. Now, he would wish to direct the Master's attention to the share register, in order that it might be seen that the shares so transferred to Mr. Fullerton were, in fact, the same as those he (Dr. Barnett) held.

Mr. VALLANCE: No doubt somebody signed the deed in respect of those shares.

The MASTER: Does Mr. Fullerton oppose?—Mr. BRISTOW: Oh yes; certainly.

Dr. BARNETT wished to observe, that none of those who had taken the shares in conjunction with him were allottees, and he would presently show the Master that a great many had been put upon the list as allottees, who were not such. This he could prove from a document he held in his hand, which contained his own private memoranda as a member of the allotting committee; and that committee, believing the undertaking to be a good one, agreed to take to themselves shares to the amount of two to one of the whole number. However, what he now contended for was, that the committee should have left his name as it stood in the share register, and not to have allowed others to have signed the deed in respect of the 500 shares he had taken; but to have allowed him to transfer to them. That they had not done, but the contrary, and the consequence was, that he became liable for the whole 500 shares. He would now wish to call the Master's attention to another proceeding of the directors, which was, that they had agreed at a meeting of the company to declare as forfeited all shares upon which the call had not been paid up, and he contended, that that proceeding exonerated him from all liability in respect of those 500 shares.

The MASTER: Does the deed authorise that proceeding?—Dr. BARNETT: The deed authorised the forfeiture of shares, and he now held in his hand a list of the shares that had been declared forfeited in the way he had described, and amongst those that had been cancelled, or so forfeited, by the directors were the 400 shares for which it was now sought to make him liable. The meeting at which those shares had been declared forfeited was held on the 5th February, 1848, after due notice; and, therefore, he contended that that was a legal and regular proceeding. He had no hesitation in saying, that those who had the shares transferred to them by the board, instead of having them transferred by him, had been guilty of a fraud in law, because they should have been transferred by him, and the *ad valorem* duty paid upon them. He would now call the Master's attention to the manner in which the shares had been transferred, and see how far that proceeding had been legal. He then read the clause of the deed stating the proceeding necessary for the forfeiture of shares, and the circumstances under which a declaration of forfeiture should be made.

Mr. BRISTOW: We object altogether to the proceeding by which the forfeiture was declared.—Mr. VALLANCE: Not a single provision of the clause of the deed, empowering the forfeiture of shares has been complied with.

Dr. BARNETT: My point is, that the declaration of forfeiture was a valid proceeding, and, thereby, I was rid of all responsibility, except in respect of 40 preference shares, which I bought subsequently.

Mr. VALLANCE again contended that the meeting at which the shares were declared forfeited was not a legal meeting.

Dr. BARNETT said, he should admit that there were not seven directors present at the meeting, as required by the deed; but the fact was, the whole company had been got up by spurious directors, who never held any shares in the company.—Mr. VALLANCE said, that did not signify. There were only four directors present at the meeting, and there should have been seven. He need not tell the Master that a company might be projected with the most honourable intentions, and yet be rendered abortive by the fraudulent conduct of the directors; but that could not defeat the objects contemplated by this Act.

The MASTER considered that it would be better to have this question settled by an action in one of the common law courts.

Dr. BARNETT said, he did not think that shareholders should be saddled with the costs of a protracted law suit, by which they would be compelled to squander their money in, perhaps, useless litigation. However, he now begged to tell the Master, that if he was be made liable for these shares, the 2000*l.* they never should get from him; they might put him in prison, but the money he would not pay, because he considered he was now only defending his rights, like an English gentleman and an honest man.

Mr. BRISTOW said, it was for a jury to decide whether the doctor was liable or not.

Dr. BARNETT said, he would thank the Master to decide now whether he had or had not made out a clear case as to the forfeiture of these shares.

The MASTER said, he understood there was an action now pending, for the purpose of trying this very question, and until that was disposed of he would make no decision. If such an action were not to be tried, he might direct an issue to that effect.

The meeting was then adjourned.

ELECTRIC TELEGRAPH COMPANY *v.* BRETT.—In the Court of Common Pleas on Thursday last, this cause came on for trial, in which the plaintiffs sued Messrs. Brett and Little for an infringement of the company's patent for communicating signals by means of the electric telegraph, and which is expected to last several days. The Attorney-General, Mr. Martin, Q.C., Mr. M. Smith, and Mr. Grove, were for the plaintiffs, and Mr. Cockburn, Q.C., Mr. Webster, and another learned gentleman, for defendants. There are two other actions pending on the same subject.—In the course of yesterday, the relative scientific details of both patents were gone into with considerable minuteness, and at great length on the part of the plaintiff, with the view of proving that the principal points of Messrs. Brett's were identical with those of the company, and had, consequently, infringed upon them. We shall give the result in our next.

THE TELEGRAPH BETWEEN FRANCE AND ENGLAND.—The proposed submarine telegraph between Dover and Calais, which we announced, some months since, had been conceded to Messrs. Brett and Co. by the French Government, is approaching completion. The tower for the battery, offices, and general works at Dover, is nearly erected; the insulated wires are in a forward state of progress, and expected to be sunk across the Channel in the course of next month.

MODEL FIRE-ARMS.—A package has arrived by the steamer, *Triton*, from Ostend, containing a musket, which is intended to serve as a model to make others at Birmingham, to the English calibre, to submit by order to her Majesty's Board of Ordnance, and for which a patent has been taken out in this country, which has been delivered for that purpose to Mr. Geo. Lovell, Small Arms'-office, Tower. Some short time since an arrival took place of a double-barrelled gun, a pistol, a carbine, and a musket, by another steamer from Ostend, which were stated to be intended to serve for a similar purpose.

GREAT INDUSTRIAL EXHIBITION OF ALL NATIONS IN 1851.—On Thursday last an influential and important meeting was held at Willis's Rooms, King-street, St. James's, to take into consideration the best means for furthering the measure. The room was well attended by the nobility and gentry, and many ladies. The two following resolutions were passed:—"That it is the opinion of this meeting that the proposal of his Royal Highness Prince Albert, to hold an Exhibition of the Works of Industry of all Nations in 1851, is entitled to the cordial co-operation of all classes, as tending to the advancement of art, agriculture, manufactures, and trade, and to the development of the resources of the British nation, its colonies, and dependencies;" and "that this meeting tenders its loyal gratitude to her most gracious Majesty for the support given to the above exhibition, by issuing a Royal commission, with the Prince Consort at its head, and for her Majesty's gracious condescension in contributing to the funds for defraying the expenses of the exhibition." From a circular just issued by the commissioners, it appears that they have decided upon receiving and taking charge of all articles sent in on and after Jan. 1, 1851, and will continue so to receive goods until the 1st of March inclusive, after which no further goods; and in case the building, however large, should not prove large enough, they reserve to themselves the right of rejection or selection.

RUSH'S DIAL FOR THE ANEROID BAROMETER.—Mr. Rush, of Elsinghamhall, Essex, has recently registered a dial for the aneroid barometer, which, by the addition of a table engraved upon the face, and calculated to give the altitude in feet, corresponding with the ordinary divisions of the scale, the mountain traveller and the aeronaut will be enabled to determine by its aid the approximate altitude he has attained, by the simple inspection of the dial. The figures upon the plate progress according to a scale invented by Mr. Rush, showing the approximate altitude in feet. The glass in front of the dial has an index marked upon its face, which may be placed over the divisions, and is fixed in a ring, having a circular motion, so that it may be set at the starting point, and the usual index at any other elevation, thus constituting a double register.

COPPER SMELTING IN CORNWALL.

Although this trade is at present confined to the principality of Wales, and has been so for some long period, during the last century works for the reduction of the ores were successfully prosecuted in the county of Cornwall. The first establishments which were erected at Bristol, in order that the process of smelting might not be divulged, were soon abandoned and removed to Swansea, on account of the double expense of carriage of both the fuel and the ore. Some spirited individuals, who conceived that the wealth and opulence of that town arose from the indolence and inattention of the Cornish miners, about the year 1700-1701, constructed works at Polruddan, in St. Austell; these were Sir Talbot Clark, Messrs. Vincent and Scobell, and it was here the first piece of refined copper was made in the county. Subsequently, John Pollard, Esq., of Redruth, and Mr. Thomas Werth, of St. Ives, made a second trial; these attempts, however, failed of success, owing to the mismanagement of the owners and the knavery of the workmen.

A few years afterwards, Gideon Cosier, of Perranzabuloe, erected works at Penpell, in the parish of Phillack; he dying soon afterwards, the interests were sold to Sir Wm. Pendarves and Robert Corker, Esq., who publicly stated they could smelt their ores as cheap as the companies could pretend to do at their establishments in Wales. They prosecuted the undertaking for some years, but on their death the project was abandoned by their heirs. A small attempt was also made at Leonsbrey, in St. Agnes, where copper was likewise successfully smelted, but on account of not being able to obtain a sufficient supply of ore, they were not further worked. At this time (1712-13) it being considered an intolerable grievance that the raw staple should be imported, in order to give other countries the benefit of the manufacture, a proposal was made to the principal gentlemen of the county to join in a petition to Queen Anne, praying that her Majesty would please to allow a bill to be brought into Parliament to have the copper mines subject to the stannary laws in all things (except being under bounds), and have the copper coined at the neighbouring coinage towns, as the tin is, under a duty of 1s. per cwt. of fine copper; this would be an addition to the ducal revenue, and was supposed would effectually secure the smelting and refining of all copper ores within the county, and enable the Cornish miners to know the true value of the commodity, and confine the profits and labour of the manufacture within the county. The confederacy of opposing companies in Wales, and the want of a sufficient insight into the manipulation, more than from the attributed expence of fuel, frustrated all successful attempts to further prosecute smelting in Cornwall at that period. However, about the year 1764, Sampson Swaine, in conjunction with some gentlemen of Camborne, erected furnaces at Entral, in that parish, but their situation being too remote from coal, the works were removed to Hayle. Every measure, according to a contemporary writer, was taken by the monopolists to traduce the credit and overthrow this laudable effort. Threats and remonstrances were equally used to oblige or cajole the owners of the mines to abandon or suppress the new company at Hayle—the opponents of the association alternately raising and lowering the price of the ores and the copper. This was entitled the "Cornish Copper Company," which has successfully carried on these works for a considerable period. About 1760 another company built an establishment at North Downs, near Redruth, but this being found an unfit place, the site was removed to Tregew, on Falmouth harbour; this, however, owing to the competition and large capital of the Welsh smelters, was afterwards abandoned.

ASTURIAN MINING COMPANY.

The affairs of this company are progressing as satisfactorily as can be expected. It may be in the recollection of our readers that the Spanish shareholders, some time since, presented a petition to Don Bravo Murillo, the Minister of Commerce, Instruction, and Public Works, requesting that he would prevent the superintendent of the company's establishments from obeying the orders forwarded by the London board. On the 26th January, a decree was issued by him, which was officially made known in Oviedo on the 6th inst. by Don Bartolemè Hermida, the political chief of the Asturias. This decree is as follows:—"Having examined the petition of several Spanish shareholders of the dissolved Anglo-Asturian Company, praying that it should be commanded that the superintendent of the company at Mieres should be restrained from obeying the orders issued by the special meeting held in London on the 25th of August last, considering that, in the statutes of the said company, it is provided that the general meetings should be held in London, and which is not in contravention of any law, the Queen (whom God preserve), having heard the committee of the Royal Council of Commerce, Instruction, and Public Works, has resolved that the prayer of the said Spanish shareholders shall not be granted—it being competent to them, if they consider themselves aggrieved, to seek redress by the proper legal tribunals, in conformity with their own statutes, which, by command of her Majesty, I make known to you, for the information of all concerned, that they may be apprised of the consequent effects.—In the Ministry of Commerce, Instruction, and Public Works, Madrid, the 26th of January: Bravo Murillo."

This impartial act of the Government certainly shows no favourtism towards the Spanish shareholders, and cannot but be highly gratifying to those British shareholders who have embarked their capital in this investment, as it clearly shows the Spanish Government intend to deal justly with both the contending parties. According to the last advices, the expenditure of the establishment was about, in round numbers, 400*l.* per month; and the make of wrought-iron for the same period, 30 tons. The committee of liquidators, through their chairman (R. Moore, Esq.), has issued the following circular to their defaulting shareholders:—"On the 30th of Aug. last, a committee of investigation was appointed to examine the accounts and affairs of this company. During the progress of investigation, the question of forfeiture, declared by the directors previously to the present call, has been considered. On this subject, we are disposed to make the following recommendation to the next general meeting of the company—namely: that all forfeited shares should be reinstated, on condition of the present call thereon being paid, and subject to an equitable deduction on the nominal value of the shares, which would place them on a proportionate equality with the existing shares, and such other terms as may be regulated, if necessary, by arbitration. In case the holders of forfeited shares shall apply for the benefit of this arrangement on or before the 5th March next, the committee will recommend that the forfeiture be remitted in respect to such shares; but, otherwise, the condition of forfeiture in the 4th article, indorsed on the shares, must take its legal course; for it is possible that the holders of those shares, in proceedings before the Court of Chancery, would be declared liable as contributories. We deem it only fair to concede the option, under just conditions of rejoining the company, upon paying the present call, so as to prevent the necessity of any resort to the Winding-up Act. On the other hand, the alternative remains of acquiescing in the forfeitures which have been already declared, subject to such further consequences as an official winding-up (if it take place) may entail. The payment of the present call is made a condition, because, otherwise, a manifest wrong would be inflicted on those who have sustained the company's credit—the question of terms we propose, if requisite, to leave open for arbitration in the usual way." From the prosperous condition of the metal trade at present, there can be no doubt that an early arrangement of all disputes, so as to enable the directors to prosecute with energy the splendid property of the company, would be conducive to the interests of all parties concerned; and, at the next general meeting, we trust this end, so much to be desired, will be effected. The iron mine of Petra, situated in the Pico de los Carbayones, in the parish of Gallegos, near Mieres, on account of its natural difficulties, has been abandoned.

SHANNON COAL AND MINING COMPANY.—A preliminary meeting of persons favourable to the formation of a company for opening and working collieries and coal mines, situated on the banks of the River Shannon, Ireland, was held last week, at Ellis's Hotel, St. James's-street. The promoters stated that the mineral fields, upon which they had obtained very valuable concessions, had been most favourably reported upon by Mr. Griffiths, the author of the *Geological Survey of Ireland*, Sir Robert Kane, and other competent authorities, and equally so by the mineral surveyors employed by the promoters themselves; that there were extensive and proved veins of anthracite, or non-flaming coal, and also of good bituminous coal; that the coal could be easily and cheaply wrought; that the recent completion of the Shannon navigation (one of the most important national works ever undertaken in the sister country) had made that magnificent river navigable for a course of nearly 250 miles, for ships of considerable burden, and made it the medium of an invaluable trading intercourse, both for the large population which inhabits its banks, and from its connection with almost every important part of the island; and that, as it was proposed to have the sites of the collieries near the banks of the Shannon, their produce could be cheaply and speedily conveyed to Limerick, and numerous other important towns situated upon, or contiguous to, the river. In the course of the discussion it was observed that a district embracing a population of nearly 2,000,000 could be supplied with the company's coal at highly remunerative prices, the present supply being from Scotch or English coal, the high prices of which necessarily limited the demand, and consequently prevented the full development of the industry of this large section of the country. The estimates produced at the meeting showed a very large profit. The parties present (some of whom were familiar with the district) adverted to the great benefit which the proposed undertaking would confer on the starving population of the district, and the consequent reduction of the poor-rate, independently of the great industrial objects which an abundant supply of cheap coal would eventually produce. Resolutions for the prosecution of the objects of the company were agreed to, and for summoning an early public meeting, for the full exposition of the views of the promoters.

TREATIES OF COMMERCE AND PATENT LAWS.

We now continue our observations upon this subject, and proceed to offer some further objections to the present *practice* of dispensing letters patent, which, unless we are not greatly mistaken, will prove the necessity of an entire revision and reform, if not the propriety of superseding the system altogether, and of devising (if any there must be) some other mode of conferring public rewards upon meritorious inventors—this latter alternative would, we think, be preferred by the majority of the public, who are at present great and helpless sufferers from the consequences of the improper use of this branch of the prerogative, which, even in the time of James I., called forth the Act, to which we have referred (the 21st Jac. I., cap. 3), restraining its exercise within the just limits of the law of the land, of public utility, and of general convenience.

The source of the evils complained of, in the time of James, is stated in the Act to have been "misinformations, and untrue pretences of public good;" unless, therefore, the grounds upon which a patent is issued are *previously* ascertained, these misinformations and untrue pretences cannot be avoided, and the public, at the present day, are still liable to the very evils which the Act in question was especially framed to prevent. Not only, however, is the public, by granting letters patent, as a matter of course, deprived of the benefit of the Act referred to, but it is now frequently contended that patents ought always to be construed *most favourably* for the interests of the patentee—that is, MOST UNFAVOURABLY for the public! Why the public should relinquish any of its rights to patentees is very difficult to imagine—why the public should not assert and exercise them, in every case where they are invaded, as they are most injuriously whenever a patent is issued on improper or insufficient claims, is much more difficult to maintain.

The first anomaly that presents itself in the present dispensation of the grant, or privilege, of letters patent is this—viz., that, IN FACT, it is *no grant or privilege at all!* since the patent is open to infringement, and, therefore, no right at all, until *after* it has been established and confirmed by the verdict of a court of law. For an infringement, damages, nominal, not real, are invariably given, so that to the expense of obtaining a patent is added a large amount of law costs, besides a loss of time and labour, which is incalculable—the cost alone, however, of *defending* a patent *right* not unfrequently amounting to 1000*l.* or 1500*l.* Surely the whole process is such as to convey the impression that it has been devised in order to promote litigation, and to enrich legal practitioners at the expense of the public. Such, however, is not the real state of the case; the mischief is traceable to the erroneous principle of granting letters patent, *at the present day*, on any terms, and also to allowing them to be granted by an officer of the Crown, whose education and habits render him altogether unfit to judge of the merits of complex mechanical and chemical discoveries, and who never inquires into either their originality or public utility—the two latter requisites being especially named, and required of the inventor, before he is qualified to receive the privilege he seeks to obtain. Indeed, it seems perfectly clear that in this latter omission on the part of the adviser of the Crown, the express purpose, as well as the expressed conditions, of the Act of 21st Jac. I., cap. 3, have been most surprisingly overlooked, so as, in fact, to nullify it altogether, since it is plainly and most distinctly therein stated, that such letters patent shall only be granted "so as also they be not contrary to law, nor mischievous to the state, by raising the price of commodities at home, or hurt of trade, or generally inconvenient;" and yet, in the face of this explicit, just, and wise declaration, the very ground upon which these grants and privileges are alone deemed lawful, is altogether and entirely disregarded, and that, too, by the chief law officer of the Crown, and of the public! by which strange and anomalous proceeding the effect of the Act of Parliament in question is to inflict a most serious and grievous deception upon both the patentee and the public.

The next objection that we would suggest is, the granting of all letters patent for the full period of 14 years. And here again the Act of the 21st Jac. I. plainly states that such should not necessarily be so, for the words are, "for the term of 14 years, *or under*," the framers of it clearly implying an undoubted and self-evident truth, that all inventions and discoveries were not of equal value and importance, and consequently entitled only to a certain measure of remuneration; and yet, notwithstanding this wise alternative, no notice whatever is, *at the present day*, taken of it; all patents are *supposed to be* of equal merit and importance! and accordingly granted for the long period of 14 years. The injustice, as well as the absurdity of this, will be admitted at once by the patentees themselves, as well as by the public, since it would be as ridiculous to contend that all improvements are equally valuable, as it would be to assert that the quality or the quantity of any article should not form the standard of its price. Again, we find that, according to the present practice, separate letters patent are required for England and the colonies, Scotland, and Ireland. But here, too, we do not so construe the Act of the 21st Jac. I. any more than we can, in common sense (the use of which is certainly admissible in the interpretation of Acts of Parliament), see the propriety of cutting up into slices the prerogative of the Crown to any individual who is entitled to enjoy it at all; neither do we know of any parallel case that can be adduced, nor any good reason, except to cause expense by the exacting of fees, why it should be so mutilated in the instance of letters patent. But we will rest our objection to this proceeding, also, on the Act referred to; the words are simple and concise—viz., "this realm;" and unless it can be shown that the colonies, Scotland, and Ireland, are not portions of "this realm," then it follows that this Act equally includes them all, and, consequently, one and the same patent applies to each—or, if otherwise, then it would be extremely difficult for the Attorney-General to point out "the statute in that case made and provided," to which he refers in the report which he makes to the Crown, setting forth that her Majesty may, according to that statute, grant letters patent to the petitioner. Either the Act of James I. includes all of her Majesty's dominions, extending the exercise of this prerogative to all, or it does not; if it does not, where, we repeat, is "the statute in that case made and provided?" But we think we can put this case so as to show conclusively that an English patent—that is, a patent taken out for England alone—is of no value at all unless it also includes Scotland and Ireland, for if it does not, then the patented article can be manufactured in either Scotland or Ireland, and thus entirely destroy the exclusive right of the patentee. If, on the other hand, an English patent does include Scotland and Ireland, then it follows that there is no occasion whatever for a separate and additional patent for either of these parts of the empire. The conclusion, therefore, is simply this: that a patentee is wrongly, in every way, persuaded to take out three patents instead of one, which it would be much fairer to confess to him at once, than to practise upon him what can only be received as a legal subtlety, unless we choose to give it a more severe, but, perhaps, not the less just, epithet of something worse.

From what has already been adduced, the present mode of administering the prerogative of the Crown in granting letters patent is, it appears to us, wrong in itself, and especially objectionable at the present day, which we shall endeavour to make still more apparent in the observations we have yet to offer upon the subject, which we shall resume in our next.

ENGLISH TRADE MARKS IN THE UNITED STATES.—The *Boston Atlas* (U.S.) of January 23, received by last Monday's mail, reports a case which was tried in the Circuit Court of the United States, for the eastern district of Pennsylvania, which is of importance to English traders. The action was brought by the gentleman who acts as agent for Messrs. Low and Son, the well-known perfumers, &c., of the Strand, and the result to the interests of the British commercial public is most important, proving that English manufacturers and merchants can resort with perfect confidence to American courts of law, when their rights are infringed upon on the other side of the Atlantic. The cause came before the court on a motion by complainant's solicitor for a special injunction, of which due notice had been given. The defendant, through his counsel, submitted himself to the action of the court, and a special injunction was accordingly granted. A writ of injunction was subsequently issued and served. The defendant was subjected to the costs of court.

THE VIADUCT OF THE GREAT NORTHERN RAILWAY at Peterborough, across the River Nene, will be a most substantial and elegant structure; the bridge will be of cast-iron, formed by three arches, with a span of 66 feet each, resting on two supports, and sustained by 24 fluted pillars fixed by atmospheric pressure. At the north end of the bridge, four brick arches will intervene between it and the embankment leading to the station at Sexton Barns; three arches of the same dimensions in the meadow will divide the bridge from the passage over the two railways running at a lower level—the London and North-Western and the Syston and Peterborough lines, which will be supported by 12 columns; and between this passage and the embankment to the south will be erected a series of nine arches, similar to those on the north. The Woodstone road will be bridged a little further on; and the greater part of the upper margin being ornamented with graceful balustrades, the *tout ensemble* will have a striking and beautiful effect viewed from the present wooden structure, leading from the Eastern Counties station to the town, not perhaps to be excelled by any railway elevation in the kingdom.—*Lincoln Mercury.*

Original Correspondence.

THE LEAD TRADE.

Sir,—In a notice, in your Journal of Saturday last, a letter, written by Mr. J. Jones, inquiring as to the fact of so large a quantity as 15,000 tons of pig-lead required this spring for the United States of America. If America is in want of such an immense quantity as 15,000 tons of lead, pray what effect will such a demand have upon the market? as, doubtless, other countries must also require a very considerable quantity of lead, owing to so many hundred—nay, thousands—of houses and public buildings of every description being destroyed during the late revolutions throughout Europe. There must have been also a little lead consumed in the shape of bullets, and not a small quantity used this winter by the sporting gentlemen. Owing to the exorbitant royalties demanded by the landed proprietors throughout the principality of Wales, several of the largest mines have been abandoned during the last few years, consequent upon the great depression in the price of lead, and cannot now be opened to bring much increase of lead ore into the market for years to come, and, with such an outlay of capital as is now required to re-open these mines, I very much question, if even the royalty was given up altogether, that they will ever again be found productive enough to pay the expenses of the working charges—in fact, as regards Flintshire, where the strata is of the hardest carboniferous limestone, and, consequently, so expensive to work, and the water charges so heavy in most of the old mines, that no great increase of lead ore from that county can be expected for a great length of time to come. I believe a London company, after expending a capital of some 200,000*l.* in the Mold Mines, were obliged to abandon them, owing to the immense quantity of water they met with; and, as is generally the case with old mines, the nest may be there, but the birds are flown. Now, Mr. Editor, according to my idea of matters, the large sums of money lost in mining speculations, in nine cases out of ten, is owing to people embarking their money in old and exhausted mines. Because a man's pocket was once full of money, it does not follow that it shall always remain so; so it is with old mines. It has been said, if you owe a man a grudge, give him an old house; this may apply to old mines also. Depend upon it, mining adventurers do not leave great riches in sight, as is technically termed, although delusive hopes are frequently held out by people introducing old worn-out mines as new speculations.

I shall be glad to be informed by any of your numerous correspondents what per centage has been returned to the proprietors upon the millions of money drained from the pockets of Englishmen to embark in foreign mines. Nay, Mr. Editor, foreigners are too wide awake to leave great riches in their old mines for strangers to reap and gather. From repeated inquiries, I have invariably found that very few lead mines ever pay after they are wrought to the depth of 200 yards under the day or adit level; the expenses naturally become so heavy, and, in most instances, the ore is found to decline in quantity so rapidly, that profit (the object of all speculation) is very questionable. No pursuit is more legitimate than mining, and nothing that capitalists can employ their money in with such chance of profit, to the extent of capital embarked, as mines, when undertaken by persons possessed of sufficient judgment and skill to conduct them; but we find that, at every spirt of prosperity in this country, there are persons leaving every profession and trade to turn miners, without the least experience, except making themselves acquainted with a few technical terms, so that a little learning is a dangerous thing; and hence we find that large sums of money are lost, and mining, consequently, considered a species of gambling. However, I do not think that bits of Mexican and Spanish will go down quite so sweetly in future as in times past, judging from the reports in your Journal of several companies of late.

Liverpool, Feb. 19. David Williams.

ACCIDENTS IN MINES.

Sir,—The *Mining Journal* of last week contains no less than 31 sudden deaths, from the following various causes:—3 explosions, 14 deaths; 13 shaft accidents, 4; 3 accidents by water, 3; 2 falls of coal and stone, 2; sundries, 8 = 31 deaths: being at the rate of 1612 per annum; and it is worthy of notice, that amongst the sufferers are several boys beneath the parliamentary age of 10 years, which, in addition to the notorious fact that immense numbers of such boys are employed, shows the inefficiency of Lord Ashley's Act.

The working of this Act of Parliament is superintended by a single commissioner (Mr. Seymour Tremenheere), who must necessarily be ubiquitous, although, as Mr. Mushet recently observed, he is never known to descend a mine, or hold converse with any person, whose interest it is to inform him of any breaches of the Act; in short, the absurdity of such an appointment cannot but be unsatisfactory, and produce dread in any proposed measure of parliamentary interference.

Amongst the three instances of explosions, it may be well to draw attention to that near Stourbridge, where the thick coal and ironstone below were simultaneously worked by two contiguous shafts; but it seems the boisterous southerly wind deranged the ventilation, by causing the pent-up gas in the old hollows to ooze through the stowed rubbish, and to fire upon the lights—there being at that period 17 persons remaining in the mine; 11 of whom were providentially saved by the adventurous exertions of some individuals. Undoubtedly, we shall be favoured with the evidence given before the coroner, now that we have Mr. Blackwell, the Government inspector, in the district; and it will be instructive to learn whether any, and what amount of, furnace or steam-jet ventilation was in practice at this colliery, which is within a trifling distance of Mr. Blackwell's own practice, as well as the highly lauded system of Mr. Gibbons. "*The pit is one which, at certain seasons, is liable to become charged with 'sulphur;' but it is not considered particularly dangerous, although, four or five years ago,* 11 *men were killed in it. They sometimes use lamps; but were using naked candles when the blast came.*"

In a case like this, the inquiry should be directed as to the artificial powers employed in ventilation, the practice of shutting up the gas in the old hollows by stowing, and the carrying of the adulterated air from the thick coal into the ironstone workings below.

Should it turn out that no effectual system was employed, but that Nature (as in many such collieries) was working in her own fashion, the pits liable "*to fight with each other,*" will it not be another astounding proof that persons are not so apt to copy the excellencies of their neighbours' arrangements as to follow the prejudices of their ancestors? and will it not be a great reflection that so much time is consumed in determining to institute some systematic legislation for the safety of these poor people's lives? and does it not also point powerfully at the necessity for some compulsory power, as prayed for by the colliers?—N.: *Durham, Feb.* 18.

CORONERS' INQUESTS ON DEATHS IN MINES—No. II.

Sir,—It is difficult to assign anything like a satisfactory reason for the great discrepancy in the results of these inquisitions on sudden and violent deaths which occur above-ground, and those which happen in the mines. If a person be killed on a railway, in a steam-vessel, or in a ship on the high seas—if a convicted felon die in prison, or in the hulks—if death occurs from supposed ill-treatment, or want of care, among the paupers in a parish workhouse, and in cases of sudden deaths from accidents, supposed violence, or even from disease, the law is generally administered with impartiality, and to the satisfaction of the public. In such cases the inquiry is prosecuted with vigour and patience, and where delinquency has occurred, the guilty parties rarely escape with impunity. The same laws which render human life sacred on the surface of the earth extend their protective influence theoretically over the lives of the miners; but it is, unhappily, too notorious to be questioned that, in practice, no such equality exists. In attempting to discover the causes for such discrepancy, we may attribute, with great probability, the better administration of the laws affecting sudden deaths on the surface "to that power omnipotent for good in this country—the public press"—which, whilst it duly chronicles fatal accidents on railways, roads, rivers, seas, in the town, or in the country, and invites the attention of the public to them by reports of the proceedings of these courts, by leading articles and interesting paragraphs, yet rarely condescends to notice the death of a miner, or to report the proceedings of a coroner's court, unless it happen to be investigating the cause of a mine accident, by which a great many men have been killed at one time. A brief paragraph, merely stating that an inquest was held, and a verdict of "accidental death" was returned by the jury, in the majority of cases, is all the notice which usually appears in the newspapers of the district. In many instances no mention whatever is made by the press of these occurrences. As far, therefore, as the salutary influence of this "omnipotent power" is concerned, it is evident that the miners do not equally participate in the benefits which it confers with those of their fellow-countrymen, whose avocations are less dangerous. Nor is it, perhaps, reasonable to expect the conductors of the local press to devote a greater space in their columns to these subjects, which, although of great importance to a certain class of their neighbours, may not be considered, by the majority of their readers, of sufficient interest to justify the exclusion of other topics, more to their taste, and which would be necessary, were full reports of coroners' inquests always given, or were even only a single paragraph devoted to *every* fatal accident which occurs in or about the mines of the district. With a full acknowledgment, therefore, of the power and utility of the press, we must not rely on the extension of its supervision as a remedy for the existing evils, but direct our attention, as has been already stated, to the mode of constituting the court, and the ordinary legal proceedings consequent upon sudden deaths in mines.

Coroners are elected by the freeholders of the county, and are chosen for life, but may be removed from office for extortion, neglect, misbehaviour, &c. They are generally attorneys-at-law, but not invariably. Surgeons, and even drapers, have served the office. As an intimate knowledge of common and statute law, the rules of evidence and medical jurisprudence, are obviously indispensable qualifications for the efficient discharge of the important duties of this office, even on ordinary occasions, the preference which is generally shown to members of the legal profession appears to be most consistent with the object sought to be accomplished by the institution of these courts. Some have advocated the appointment of physicians, or surgeons, inasmuch as many, if not most, of the cases to be investigated require the assistance of medical knowledge "to the proper construction, elucidation, and administration of the laws." In some towns it has been customary to appoint both a solicitor and a surgeon as joint coroners, and thus enable the public to derive the benefits resulting from their combined intelligence and professional qualifications. Without entering into a discussion as to the respective merits of these parties, or the expediency of joint appointments, it may be observed that, as the coroner has not the advantages of properly instructed counsel to assist him in illiciting the truth, he is necessarily obliged to rely on his own knowledge, and can only judge of the value of the evidence in proportion to his information on the subject; and if he be ignorant, for instance, of the mode pursued in mining, and the scientific principles involved, and has a reluctant witness to deal with, he will be unable to put such questions as are really necessary to develope the facts, a true knowledge of which is essential to the "elucidation and administration of the law." It may be said, the coroner and the parties aggrieved have the power to call before the jury such persons as are able to give the evidence requisite to a thorough exposition of the circumstances, which is, undoubtedly, correct; but to make this privilege of any practical value, the coroner ought to have the power of paying the parties so called in for his assistance, or at the request of the relations of the deceased. This he cannot do at present, otherwise than by referring such claims to the magistrates at quarter sessions, who may, or may not, allow the payment of them out of the county funds. J. Richardson, C.E.

Neath, Feb. 19.

THE VENTILATION EVIDENCE.

Sir,—Mr. Richardson has been rather incautious in inculpating my letter on this subject, as "attacking the characters, and impugning the motives of those who differ from me in opinion." My letter can only be so distorted upon one supposition. Who is it that Mr. Richardson defends?—Are we to understand that he identifies himself, as an agitator, with the Chartist, Reynolds? If so, the point is, that we differ as to what is "creditable" and "necessary," or "satisfactory," for a "sound mind to reflect upon."—David Mushet: *February* 19.

EXPLOSIONS IN STEAM-BOILERS.

Sir,—Your late Number contained an account of the explosion of a locomotive engine on the York, Newcastle, and Berwick Railway, whereby the fireman was killed, and two others seriously injured; but this sinks into insignificance compared with the terrible catastrophe just announced from New York, wherein 50 individuals were killed and the *same number* maimed and wounded! The engine seems to have been of 200-horse power. By the force of the explosion, the building was blown into the air, and all the works destroyed.

Such catastrophes must occur, and increase, if persons will "settle on their lees" and turn a deaf ear to the "charmer, charm he never so wisely"—the truths developed by the discoveries of science being spurned, or "set at nought." Calcareous deposits in boilers are, beyond all controversy, the fruitful parent of these terrible occurrences, and I know no method of entire and complete prevention save that secured by Mr. Horsley's patent; but I conscientiously believe it to be most triumphantly effective, based as it is on sound and inviolable scientific principles. J. Murray.

Portland-place, Hull, Feb. 20.

Erratum.—In my last week's communication on the aneroid, for "radiation of carbonic air," read *radiation* of caloric.

ON THE ECONOMY OF FUEL IN MAKING IRON.

Sir,—I observe some observations in your useful Journal relating to the use of gases, &c., by your correspondents, Mr. Mushet, "F. C. W." and Mr. B. Thompson. It is surprising to me that, in such a place as England, this most important question is not better attended to; and if I may judge from the tenor of some of the letters written, they display, on your side, almost an ignorance of the improvements introduced of late years in this branch; and in proof of which, we find that large works have been recently erected for the manufacturing of iron on the old fashion plan, where nearly half the effect of the fuel is lost in chimneys, and a heavy cumbersome machinery put up to move an unnecessary mass of iron.

The following is extracted from Mr. Evan Hopkins, C.E.'s, report on some of the iron-works of Prussia, in 1848, which will show that the continental ironmasters are in advance of the English in simplicity and economy:—"The continental ironmasters have availed themselves of every practical and scientific improvements which have taken place during late years. Fuel being an important and most bulky material required for manufacturing iron, every possible economy in its application has been carried into effect by very judicious arrangements in the blast-furnaces and forges. Consequently, although coal is comparatively scarce and expensive on the continent, yet, by the use of gases, and the flames commonly escaping through chimneys, they reduce the cost in the make sufficiently low so as to compete with the English makers. The blast-furnaces are contracted near the top, and are furnished with a series of flues, which are conducted into a circular one, and thence, through a chamber, to chimneys, and the mouth of the furnace covered over with a cover of sheet iron. The gas thus drawn from the furnace heats the blast-pipes, thence conducted through a pipe to the boilers, where it is ignited, and produces abundant steam for working the blowing-engine. By this arrangement it not only saves the fuel usually consumed for such purposes, and the attendant wear and tear, but it causes, also, an intense draft in the furnace, and increases the action of the blast below. It is proposed to erect the new furnaces in a cylindrical shape externally, and encase them with boiler plates, with a projecting flange above to support the gas flues—the internal part to be formed in the shape of an ordinary crucible, and supplied from without with a series of tuyères," &c.

Mr. Hopkins then proceeds to describe the forges, &c.:—"It was evident, at the first glance, that the manager was not only a practical man in this branch, but a man of scientific attainments, having a full knowledge of the process, and not merely the routine of his forefathers, as is too commonly the case. He had duly availed himself of all the best and latest improvements in the manufacture of iron, avoiding all superfluities of the old methods, effecting every object in manipulation of the conversion of the pig-iron to the finished production, by the most direct, simple, and cheapest means. The moving power for working all the machinery is obtained from the heat of the flues of the puddling and heating furnaces, and thus avoiding the great cost of fuel employed in the ordinary mode for generating steam by separate fires, and the wear and tear attending them. Not a single chimney is seen attached to the furnaces. Again, this steam-power, obtained from the heat of the flues, is applied, separately, to each set of rollers, in the most simple and direct manner possible, avoiding the great framing and heavy gearing required for the old system of transmitting and distributing motions from one central power, and the consequence resulting from breakages. Instead of a large, cumbersome, and expensive engine, with its great framing, each part is driven by separate horizontal cylinders, applied direct to the respective main-shafts (like the locomotive system), and these have been at work since the commencement without a single accident or the least trouble, and requiring only a boy to each to regulate the speed, and stop them when not wanted. The steam is always in excess, and is conveyed to the cylinders, from (small) boilers attached to the end of each pair of furnaces, by means of pipes supported on columns, and are provided with syphon copper pipes, to allow for contraction and expansion. Each engine consists of only a bed-plate, supporting the horizontal cylinder, with its guides and connecting-rod—the whole of which is made and put up at a comparatively small cost, and in a short time, occupying little space, and causing but little wear and tear, and no cog-wheels, and each set of rollers made independent. This is, doubtless, a good system of mill-work in works of this description, where stoppages from breakages are liable to cause serious delays, waste of iron and fuel. By applying the moving power to each set of rollers, squeezers, hammers, shears, &c., instead of the complicated old gear, in which a single breakage stops the whole mill, there can be no apprehension in the execution of orders to the exact time. The saving per ton in the cost of the make of iron is very considerable."

The above, Sir, which is only a short extract from Mr. Hopkins's report, will, I trust, give your correspondents a better idea of what is doing in this part of the world.—T. M.: *Liege, Feb.* 18.

USE OF STEAM IN THE PUDDLING-FURNACE.

Sir,—I notice some remarks on the use of steam in the puddling-furnace. I beg leave to state that, in 1838, I suggested that application to Sir J. I., then Mr. Guest, a short time before the coronation of her present Majesty, when he was created a baronet. I was sent to Dowlais to try the effect. I there fully explained my views to Mr. Thomas Evans, who said he would get some gas-piping laid on from a boiler to the nearest puddling-furnace, to get a supply of steam. I went over to Abergavenny on a little business, where I remained a couple of days, expecting the fixing of the pipes would occupy that time. When I went back to Dowlais, I was told my plan had been tried, and proved a complete failure. Some puddlers were brought forward, who declared it was impossible to work a puddling-furnace with steam in it. I had not an opportunity of observing the effect, as the steam-pipes had been removed. Mr. Thomas Evans was extremely kind to me; he told me I had free access to every part of the works, and liberty to try anything I thought fit. He directed some of the foremen to give me every assistance, explain everything to me, and furnish me with any information I required. He then begged me to commit to paper any idea that occurred to me, if I saw it likely an improvement could be made. He said his time and attention were so fully occupied that, if I made a verbal communication, he might not at the time be able to give the matter a thought, but that if I left a paper on the desk in his office, he could study it when at leisure. I remained at Dowlais two or three months, where I got my initiation into the art and mystery of iron-making—certainly a most magnificent school. Some time after I had left, I saw that a patent for improvements in the manufacture of iron was taken out by Sir Joshua John Guest and Mr. Thomas Evans, but never for a moment thought it was for using steam in a puddling-furnace, until about six months afterwards, when I saw an abstract of their specification, and found it was neither more nor less than my plans—the only novelty being the use of what they termed telescope tubes, an arrangement for projecting the steam-pipe forward into the furnace when the steam was turned on, and drawing it back when the steam was shut off.

I have a great idea that Mr. Francis Crawshay would very much like to get hold of my plan for forming pure metallic iron on something of the same sort of terms. We have had some correspondence; he thinks the thing practicable, that it would be an important and valuable acquisition to the art of iron-making, and is ready to work it out for me; but first he must see all my plans on paper. The only reply I can make to this, is the popular quotation generally ascribed to the celebrated Mr. H. Walker.

Feb. 19. T. H. Leighton.

MANUFACTURE OF IRON.

Sir,—I am compelled to trouble Mr. Leighton with a few more last words on a point he has quite misunderstood. I have nowhere said that the cinder in bar-iron (where there is any) is simply oxide of iron. I have specifically stated that it contains various earths, in more or less proportion, according to the process of the manufacture. Nor is there the least question that the constitution of the cinder, or alloy, with which the iron comes in contact, affects its quality. Much is positively known on this subject, but much remains to be known, and if Mr. Leighton can distinctly classify the constant effect of various alloys upon resulting quality, he will supply a great desideratum.

Mr. Leighton must not depend too much on the fact of some particles of coke, or charred sawdust, remaining unconsumed in the puddling furnace. He must be aware that nothing is more difficult to consume than coke, or charcoal dust; it is, in fact, in practice, a most troublesome incombustible. He must, besides, consider that each particle of dust contains, perhaps, 100 times as much matter as the chemical atom of carbon, which is combined in the iron; and, still further, that these chemical atoms in the iron are *diffused*, a circumstance known to be peculiarly propitious to chemical changes. Mr. Mitchell has explained how iron, in which this property is most complete, is best adapted for the puddling process. The incombustibility of coke-dust probably arises in this—that particles so minute and isolated are immediately enveloped in an incombustible atmosphere, which continues there, because the small bulk of the substance is not obvious to mechanical disturbance, or change. If all these considerations are united, Mr. Leighton will see that his unburnt dust (out of, I presume, a considerable quantity) gives no real argument against the chemical changes in puddling, which, undoubtedly, take effect upon the carbon, chemically disseminated through the mass of pig-iron.

As to his plan for assisting the smith, Mr. Leighton has yet to prove that such a quantity of cinder can be intermixed in the iron as to produce, and that it will produce, his proposed effects; and he must further show that the smith will really "like" an iron, a great part of which will be left in the fire, and a great part scattered under the hammer, increasing his waste, and diminishing the profit of his labour.

If there is a trap in the cable bolts, it is of Mr. Leighton's own framing. But, I confess, he really has, at the end of his letter, falleu into a trap of my own construction, and which I baited with sodium, interposed between two other substances. I did not say the water was to contain *soda*, but *sodium*. If the sodium abstracts the oxygen, what is to become of the *water?* This is exactly the fallacy in which he is entangled by his carbo-oxide. When the water is decomposed, there will remain soda and pure hydrogen. So when the carbon is presented to the oxide of iron, there will remain carbonic acid and pure iron. The only difference is, that the hydrogen flies off, leaving the soda, and the carbonic acid in the other case flies off, leaving the iron. Mr. Leighton's housewives, therefore, instead of rejoicing in a happy adulteration, will grieve over their springs dried up; and it is only the fortunate smith that will be gladdened by the less forgacious property of his pure iron. David Mushet.

Feb. 19.

GASES FROM THE BLAST-FURNACE.

Sir,—The letter from "A Constant Reader" is, in fact, a reply to the inquiries of "F. C. W.," although he does not appear to have observed this last communication. The use of the fan to bring the gases down to the hot-air stoves appears a felicitous expedient. It is evident the gas from the top of the furnace will not descend, unless the chimney is higher than the furnace. This is no obstacle for its use under boilers where the stack is high, but it has proved a great interference to its use in heating air where there is a high chimney, which produces on combustion great draught, and consequent heat proves very destructive. "A Constant Reader's" friends in Staffordshire seem to have cut the knot of this difficulty.

Feb. 19. David Mushet.

IRON MINES IN GLOUCESTERSHIRE.

Sir,—Some iron of excellent quality has been discovered near Wewent, in Gloucestershire, samples of which, forwarded to me by Mr. Henry Virgo, contained, on an average, more than 50 per cent. of iron of a superior quality. These ores are of the red variety, and are well calculated for refinery puddling-furnaces, and also for improving the quality of the Staffordshire pig-iron, by admixture in the blast-furnace; they are very fusible, and yield a strong and tough quality of iron. As the deposits of ore appear to be extensive, this discovery will prove of importance to the district wherein the mines are situated, by giving employment to numbers of a large and indigent agricultural population. R. Mushet.

Coleford, Feb. 20.

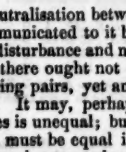
METAL RAILWAY SLEEPERS.

Sir,—In your last Journal, there is a paragraph, stating that a combined cast-iron chair and sleeper had been laid down on the South Eastern Railway, and has been found to answer well, both as regards its wear and economy. You ascribe the invention of this combined metal chair and sleeper to Mr. Barlow, the engineer of the line; it is presumed, therefore, that there is some essential difference between those in use on the South Eastern Railway, and those invented by Mr. S. Reed, of Newcastle-upon-Tyne, and patented by him in 1846. It would be interesting to many of

your readers to learn what difference there really is between the sleepers and chairs used by Mr. Barlow, and those invented and patented by Mr. Reed.—J. RICHARDSON, C.E.: *Neath, Feb.* 12.

IMMATERIALITY OF THE ELECTRIC FLUID AN IMPOSSIBILITY.

SIR,—The maintainer of the immaterial theory of electricity, let him employ what language he pleases, can have only one position to adhere to—namely, that there is not a bodily transference of matter in electrical experiments, and that all the phenomena result from a new state, or condition, that the matter employed assumes. On applying this principle to the galvanic battery, we find many results absent that, according to the laws of electricity, ought to be found—for instance, two bodies in different electric states neutralise each other when they are in contact, or connected by good conductors; in other words, their electricities are said to combine. In a galvanic trough, according to this theory, each pair of plates must be considered to assume opposite states—the idea of the transference of any pyrogen not being admitted; and as they are in most intimate contact, or connection, they should neutralise each other. The neutralisation should also be complete; for the disturbance in the state of the copper is precisely to the amount that can be produced by the power and action of the zinc plate upon it; and the disturbance in the state of the zinc plate is just to the degree the copper-plate has power to effect, and no more. The power to neutralise each other should be also equal; since the connection between the plates is as close as can be well conceived; the pair in the trough being united by the acid solution (an excellent conductor), and the connection between the plates in the different divisions of the trough being metallic, and yet, though mere contact of bodies in an opposite state produces perfect neutralisation, the plates remain unneutralised. So contrary is the result to a state of neutralisation, that a writer, who supports this theory, sets it down as a law, that the copper of the first pair *conducts* its electricity to the zinc of the second, and so on; and that the quantity and intensity of the fluid is increased with an increase in the number of the plates; although, by the theory in question, no matter can pass from one pair of plates to another. If merely a new state were assumed, the power of the battery ought not to be increased by the addition of any number of pairs of plates—the only effect that could be produced by adding the plates being that they would assume the same state as those already in the circuit—not from any surplus power in the rest of the battery, but from their own action with the acid. No surplus power could, by possibility, exist in any pair of plates to give increased energy to the operations of the wire completing the circuit. Ritter's piles are open to the same objection, and, if possible, with greater force; for the zinc-plate, A, is in direct contact with, and in an opposite state to, the copper-plate, B, and yet they do not neutralise each other. The paper, card, or other substance, employed between the zinc-plate, C, and the copper-plate, B, ought also to produce a neutralisation between the plates, on account of the conducting property communicated to it by the acid solution in which it has been steeped; and the disturbance and neutralisation should be effected by each pair of plates; and there ought not to be any surplus power to proceed into the neighbouring pairs, yet an increase in their number adds to the power of the pile. It may, perhaps, be thought that the degree of disturbance in the plates is unequal; but, as already observed, the degree, or rather proportion, must be equal in each plate of a pair—it being just to the amount that each can produce upon the other; the power of neutralisation ought also to be in the same ratio. It may be said that the disturbance is renewed as fast as it is destroyed; but, according to the law of neutralisation on contact, it must also be assumed that the new state is destroyed as fast as it is assumed.



Again, admitting that a permanent disturbance of the state of the galvanic battery can be maintained, according to this theory, the new state should preserve some degree of uniformity throughout. Take the wire, for example, that completes the circuit; the state should not be in one degree of intensity at one part of the circuit, and in another degree at another. One part of the circuit should not become red hot and the other not—an effort that is produced in a battery of sufficient power by placing a piece of finer wire than the rest in the circuit. The new state being merely a change of condition, nothing of this kind should occur, since it can only arise from the passage of a substance—to the progress of which the finer wire offers an impediment; the greater intensity of the action, on account of the impedient, causing an increase of heat—the indication of an incipient separation of the particles of the wire. Thus on both of these points the theory is incorrect; for an increase in the number of plates in a trough, or in Ritter's piles, gives an increase of power; and, on interposing a piece of fine wire or gold-leaf, they will melt or deflagrate if the number of plates in the battery have been increased to a sufficient extent.

The effects observed in the circuit wire are also quite contrary to what should be produced, if it merely assumed a new state. The circular action that causes a magnetic needle to take up a rectangular position, to the circuit wire, is not consistent with a mere change of state in the matter of the wire, which involves an incipient chemical operation; and, if the theory in question be correct, must bear much resemblance to the "electro-tonic" state of Professor Faraday. The idea of the two fluids is also equally inconsistent with the same theory; for in the trough and Ritter's piles they would be constantly coming in contact with each other without combining, notwithstanding the powerful affinity they are assumed to have for each other.

The existence of pyrogen, which is clearly proved by my experiments, agrees most completely with all the phenomena, and especially with the non-neutralisation observed during its progress through the trough, and the increase of quantity procured by adding to the number of the plates. Much of the fluid is, however, dissipated during its progress through the battery—a loss for which M. Peltier found it necessary to make deductions in his calculations.—JOHN J. LAKE: *Ordnance Office, Portsmouth, Feb.* 16.

THE DIAMOND.

SIR,—On a former occasion, I believe, I promised to refer to some of the experiments I had made on the combustion of the diamond. On exposing a fragment in a nidus of magnesia to the hydro-oxygene blowpipe, it became *black*—in fact, was converted into *coke*. I have seen the impression of the platinum wire on the diamond when exposed in a cage of that metal to the flame of the compound gases. On one occasion, the fragment of a diamond was in a state of *fusion*, and assumed the *spherical form*, since repeated successfully by Prof. Silliman, of New York. I have, by frequent and continued applications of the alcoholic flame, from an instrument on Dr. Hook's principle, *gradually dissipated* the diamond enveloped in platinum wire!—J. MURRAY: *Portland-place, Hull, Feb.* 20.

SHIPWRECK.

SIR,—I had overlooked Mr. Carte's rejoinder among "Notices to Correspondents." In my several works in reference to forming lines of communication with the shore, will be found various suggestions; all, I believe, anterior to Mr. Carte's exertions in this field of enterprise, and the float I proposed was a natural sequel to these plans and propositions. Whether Mr. Carte's buoy, from its *form*, is best adapted to find its way to the shore, may well be doubted; but I have calculated, I believe, the conditions best suited to ensure a rapid transit of *my* float to the shore—the appendage of "a port-fire" I do not claim. There is ample room for every competitor in this arena of philanthropy, whether it be the very portable belt of cork invented by and carried into successful operation by Mr. Andrews, of Manchester, or the circular buoy of Mr. Carte. The former I have seen ten years ago. I believe Mr. Carte has also proposed the *rocket*, to form a line of communication in shipwreck; but Mr. Dennett's (of the Isle of Wight) excellent rockets have long been employed with pre-eminent success, and have achieved trophies from the deep far more numerous and important than all that has ever been attained by Capt. Manby's shipwreck mortar, and who received from the British Parliament 10,000*l.*

I perceive that, in the last hurricane, the *crew* of the fine Spanish brig, *Principe Alberto*, bound from Glasgow to Havannah, and lost off the coast of Cornwall, were *entirely saved* by DENNETT'S ROCKET LINES. The brig went to pieces. And what reward has Mr. Dennett had from Government? To his care was committed a short time ago the custody of Carisbrook Castle, an interesting ruin, in the Isle of Wight; and I know not whether it be worth 40*l.* or 50*l.* annually—I believe entirely derived from fees of admission! Thus are benefactors to their country, and the glory of their species, rewarded in Great Britain. Alas! for the boasted dignity of human nature! Some time ago Mr. Dennett had an attack of paralysis, and may now be insensible to this humble tribute from one who knew him, and felt a deep interest in his success. J. MURRAY.

Portland-place, Hull, Feb. 19.

WRIT OF SCIRE FACIAS.

SIR,—Your remarks on Mr. Lowe's trial give me the occasion I wished for to recur to a correspondence on the 10th of March last. The correctness of a statement I had made on memory was then questioned by "An Ironmaker of the Third Generation;" I did not doubt I was right, and was certain, as I had advanced on the 3d of March, that my late father's knowledge of the subject was too accurate and extensive to overlook any important fact in the manufacture of iron. But having at the time no data to support my memory, I could not reply to any purpose. I have since read the short-hand writer's notes of Mr. Hill's trial, and I find, as I believed, that my father's evidence not only gave the merit of the successful use of finery cinders to Mr. Hill, and procured him a verdict, but that his evidence also details that previous use of them mentioned by "An Ironmaker of the Third Generation," at Low Moor, and other works in the north. But in these cases they had deteriorated the quality of the iron; the avoiding of this was the successful point of Mr. Hill's process. If, therefore, the difficulty of obtaining a verdict under *scire facias* be so immense, as you represent it (although Mr. Lowe's is not the solitary instance the Attorney-General has alleged), it must be evident to "An Ironmaker of the Third Generation" that a process which passed successfully through so impracticable an ordeal had its merits then settled beyond the reach of any "controversy."—DAVID MUSHET: *Feb.* 19.

On the Prevention of Accidents in Coal Mines.

We closed our remarks on this important subject, in the *Mining Journal* of the 9th inst., with the evidence of T. E. FORSTER Esq., and now proceed with that of GEORGE ELLIOT, Esq., a colliery proprietor and viewer, in the north of England. This gentleman stated that he went down the pits as early as nine years of age, and had been practically acquainted with them ever since—14 years officially. He considered that the greatest improvement which could be made on the present system would be to obtain a larger amount of atmospheric air into the pits; had examined the greater portion of the collieries in Durham, and was satisfied the furnaces were not so well constructed as they might be; would like a larger fire surface than they generally have; instead of bulk in the fuel under combustion, he would prefer surface. Instead of a fire of 6 ft. in diameter, and from 18 in. to 2 ft. thick, was satisfied that, by spreading it over a larger surface, with half the thickness, a greater heat would be obtained, consequently a more rapid expansion of the atmosphere would take place, and greater currents pass through the mine. Had made various experiments with Mr. GURNEY'S high-pressure steam, was favourable to its use, thought the best plan would be, in applying it, to make an ordinary furnace, such as is daily used, put a boiler on the top of it, and thus have the full benefit of all is due to furnace ventilation, which he thought could not be dispensed with, and the whole value of Mr. GURNEY'S plan would be, of course, combined with the same amount of fuel at the bottom of the pit. The following evidence as to the necessity of large airways is important:—

I have some other statements respecting Pensher Colliery, which I made in 1835, and which have also been made within the last month. I merely produce these as a proof of the correctness of what I have stated, that it depends very much upon the size of the air-courses under-ground for the purposes of ventilation. I was there in 1835; I remember that I took the calculation at that time, and since then my father has had the management of Pensher Colliery. I wrote to him; he furnished me with these facts, which I suppose may be used, exactly in a similar way as I have taken them. I recollect taking them with the anemometer (invented by my late brother Mr. THOMAS ELLIOT), standing there in your Lordship's Committee-room, and I find at present that the current of air is less, although the power of the furnace is 10 degrees higher in one pit, and in the other 15; that there is less atmospheric air passing up than there was in 1835; and the reason for that is this, that there is a portion of the goaf—viz., where the coal is all worked away; it is my father's plan to pass a large quantity of air over this goaf, to keep it clean, and by a contraction of his air to force it over this place to keep it well cleansed; the effect of that is to reduce the quantity. These are two cases which are quite an illustration of my view in 1835 and 1849; the same pits. I can give the different temperatures at that time, and at the present time, with the different quantities passing over, thereby establishing that there is no use in having either a hot shaft or a large shaft for the up-cast or the down-cast pit, unless you have good large air-ways underground, for the purpose of permitting the air to travel and get out again as soon as possible.

In speaking of the safety-lamp, Mr. ELLIOT expressed himself much in favour of the Clanny lamp over all others, and its greater safety; when going against a current of air there is no fear, as in the case of the Davy lamp, of the flame being blown through the meshes of the gauze, being enclosed in a cylinder of glass, although the glass was not altogether safe from cracking; he had sometimes thought them safer with a crack, because they yield to increased heat, or any change of temperature, after a simple fracture has taken place. Recurring to the subject of ventilation, Mr. ELLIOT stated that he had at his collieries pipes leading from the surface, where they kept a large head of water to extinguish any fire which might ensue, to different points under ground, and suggested, as it was well known that the effects of an explosion was to destroy a larger amount of human life by the after-damp than the fire itself, that instantaneously on an accident of this kind ensuing, it would be a good plan to inject streams of milk of lime to neutralise the carbonic acid, and thus save those lives which the explosion had spared. He stated that only during the previous week his men had been busy sinking a counter balance pit, 6 ft. diameter; when 15 or 16 fms. down, the carbonic acid gas had kept them out for two or three days; a candle would not burn in it, and they knew not what to do, when he got a shovel full of quick lime and threw down, and in the course of 10 minutes they were enabled to descend, their candles burning as in a common atmosphere. This practical fact had induced him to suggest the expediency of keeping a large reservoir of lime and water always ready; or, probably, some material might be found which had a still greater affinity for carbonic acid than even lime. On the subject of accidents by ropes and chains breaking, the witness spoke highly of FOURDRINIER'S apparatus; did not think its use would render parties who are responsible for the soundness of the ropes and machinery more careless; used it at his pits for economy, as well as safety. A pair of ropes probably cost from 600*l.* to 700*l.*, and they would formerly be taken away long before they were worn out, just because they were thought not safe; they could now be safely used till quite worn out; there could be no difficulty in keeping the apparatus in order, as the banksman and the man at the bottom of the pit had it before their eyes every time it came up and down, and could immediately detect if anything went wrong, unless very careless indeed. At the Monkwearmouth Colliery, the deepest in England, being 286 fms., or 1716 ft. deep, it was stated that the engine draws 2 tons of coal, besides the cage and four tubs, making in all 4½ tons in 65 seconds, being at the average rate of about 20 miles an hour, when in the middle of the pit going at the rate of 30 miles per hour, slower at first starting, and on arriving near the top. Had seen this great weight, travelling at this speed, suddenly stopped by severing the rope with perfect safety, Mr. FOURDRINIER, and witness's brother, Mr. JOHN ELLIOT, being on the cage at the time. The men at Usworth Colliery like it so much, that they had a subscription to have a silver model of the machine made, to be presented to the patentees. In speaking of colliery practice education, witness said he looked to the question of education in selecting a man for the office of overlooker:—

We have viewers who serve an a prenticeship; they are regularly indentured, and pay a premium, perhaps of 300*l.* or 400*l.*, to learn to be viewers; but when they are out of their time, they, perhaps, are not the persons that you would put exactly into a situation of that kind; they are educated for a higher office, to have merely a general superintendence, and not to be the working men in the matter. The overmen have a great deal to do in keeping the men right and agreeable; they have all their labour to value and keep account of; it must be a man who has been taught and worked at everything with his own hands at the pit; and, therefore, you must have substantial good men in that capacity. You may take this as a measure of their education: these people have all the bills to make out, for instance; they make out all the account of labour, because those below are mostly paid by the piece; those bills have to be made out by the over-men, and inspected by the under-viewer, and then by the chief viewer.

On the expediency of Government inspection, Mr. ELLIOT remarks:—

With respect to the fact of suggesting, supposing the inspector comes and suggests to me, "You have too little air in this district of the colliery;" I say, "I am quite sure I have quite enough." Next week, from some other cause, a bag of gas comes off, and we have an explosion, which would not have been prevented by a larger quantity of air; an accident has occurred, and the blame comes upon the colliery owner for not having adopted the inspector's suggestion; that is one of the difficulties which I see. I have turned it over, and there is a point at which I want to arrive, and I do not know how to get to it. The only conclusion that I could come to would be something like this; that supposing an inspector was appointed by Government, and he was to go down, he ought to be a man that would be tolerably acceptable to colliery viewers. I suppose, if he went down and looked at the plans and workings, and so on, and suggessed, after a conversation with the viewer, that he thought it would be better if he had a little more air in a certain district of his pit, the viewer might say, "No, I think I have quite enough; it will put me to a great deal of expense to do this; and, therefore, I hope you will not press it." The inspector, being alive to his duty, says, "I cannot let you off in this case, you must have this done;" the viewer says, "I will not;" then comes the difficulty. Now, the way that I would provide against that would be this; that the Government should appoint two or three of the most practical colliery viewers in the north, and that they should sit, say three of them as a body, to determine this matter between these two parties; let it be their own act (that is, let it be done in the district by the colliery viewers), so that there shall be no suggestion hanging over the colliery viewer; if there is anything arising at the moment, let it be referred to those parties and put out of the way, not to have a suggestion hanging over, lessening the responsibility, perhaps, of the one party, and increasing the difficulty of the other, but to have it settled by that court at once. Now, I think that that would operate in this manner, that as the ventilation would then be a subject which would probably come more before the notice of the viewers, there would be a kind of emulation amongst them always to have as high a statement of ventilation as possible, to look well before the committee, if it were necessary to go there; but I think that, rather than go there, knowing all the viewers as I do in our district, the case would be a very bad one if the colliery viewer did not get the matter in some way conciliated and set right without going before those gentlemen; I think the inspector would almost be certain to be wrong if he went there. I would merely suggest this idea. I am supposing that he has the power of suggesting, and I say that the fact of suggestion would operate just as painfully upon the sense of responsibility, if a man was alive to his duty, as if it was an order; I could not live under the responsibility of a suggestion.

J. MATHER, Esq. gave some very interesting information on the power of the steam jet; he stated that in a large alkali and muriatic manufactory where it had been applied, it had superseded the use of two chimneys, 200 feet and 170 feet high each; he says "six jets, five-sixteenths of an inch big, do the work of a chimney 200 feet high, which cost 2000*l.*; it was the most striking fact I have ever seen."

The parties used to be perpetually paying damages for injury to vegetation, and the neighbours were complaining that it was a most offensive manufacture, so much so, that a very extensive work of that kind was about being destroyed altogether, when the adoption of this plan enabled them to discontinue the use of the chimneys, and destroy the source of injury. They produce an enormous current. In the condensation of the gases they pulled the air up 24 feet, through a current of water passing down with great velocity; they drew the muriatic acid gas through this shaft, and got it absorbed altogether, and the furnaces were kept infinitely better than with the 200 ft. chimney. Then there was this additional result, which may be also observed in the mines, that this ventilating process in south winds is not affected at all; the furnace is invariably affected in south winds. Frequently you have accidents from the want of pressure in the atmosphere, barometric and hygrometric causes; for we know that accidents frequently come about by south winds, accompanied by the circumstances I name, and they also used to affect similarly the furnaces; but on inquiring amongst the people whether such is the case now, they say invariably, that the jet is so steady that they have no back-puffs, as I think they call it, of muriatic acid gas, which was injurious to the health of the men working there; they work as well and as healthily now as in any other manufactory. They have taken a patent (not in justice, I think to the original inventor) to apply the steam-jet to this particular purpose of condensing acid gases in manufactories with the high-pressure steam-jet through a cone, the very suggestion which was thrown out by Mr. Gurney, in 1835. I understand that this operation for the ore-smelting furnaces, if adopted by them, will become of vast importance; that there will then be absolutely supplied by their processes sufficient sulphur, which is now lost, to render it quite unnecessary to have the sulphur of Sicily introduced at all.

The witness further said, he did not think it fair to the public, or individuals, that an invention, the benefit of which was given to the public by the inventor, should be taken advantage of by other parties for their own private gain, and that if any is to be benefitted, it should be the person whose genius invented, and threw it open to the world. The year previous to the introduction of the jet, the parties mentioned paid 300*l.* for damage to vegetation; the jet had been in use four years, and they had not been called upon for a farthing.

FRANKLIN COXWORTHY'S DISCOVERIES IN NATURAL PHILOSOPHY.—No. XVII.

With the present notice we shall conclude our examination of Franklin Coxworthy's new doctrines in natural philosophy, confining ourselves to the application of his discoveries with reference to electricity, as elucidating the healthful or contrary state of the human frame, and of vegetable productions; and to a brief outline of what has been previously demonstrated in the course of our humble efforts in search of the truth.

Having identified electricity with cold, and deduced the inevitable conclusions that the surrounding regions are positively electrical, the atmosphere more or less negative or positive under varying conditions, and the earth always negatively electrical, as compared with the surrounding regions, it will follow as a natural consequence, that the animal creation, that human beings certainly, must be negatively electrical, as compared with the atmosphere, the temperature of the human body being always above that of the air in which it healthfully exists; and we take the generation of putrefactive compounds in the human system to be a strong corroborative proof.

The earth, then, under a healthy condition, as regards mankind, being negatively electric, and the atmosphere positively so, and, therefore, highly conducive to respiration (as frosty weather is to combustion), we have provided every requisite for the generation of the necessary amount of heat in the system, and its retention, also; or, the electric state of the air induces a negative state of the body, by the creation of a demand for it in the several compounds of respiration, &c.

If, on the contrary, from causes that have yet to be ascertained, these conditions are reversed, and the earth on which we stand is thrown into a positively electric state, whilst the air we breathe becomes negatively electric, we not only generate a decreased amount of heat, but the cold (or electricity) being more readily conducted to the system, through the extremities, to supply the necessary demand for respiration, &c., we have thus induced complaints of a positively electric character, such as influenza and cholera, during which are generated compounds differing in their nature from those of a healthy, or negative, electrical state—in influenza, watery discharges from the nose—in cholera, what medical men call "rice-water discharges" from the intestines, which, being free from smell, differ most essentially from the evacuations that occur in a healthy condition of the system.

With respect to the vegetable world, the evidence afforded in our preceding article, of the relative electrical state of the earth and the atmosphere, in conjunction with the principles we discussed when treating of the formation of snow, cannot fail to throw considerable light on such a disease as that of the potatoe. Like influenza and cholera, the potatoe disease is, comparatively speaking, of recent origin. It had from time to time made its appearance before in a less intense form; but it was in 1845 and 1846 that its effects were the most fearfully felt. In these two years the earth was negatively electric; whilst, however, to the detriment of human health, its condition has changed since then, the potato disease has correspondingly subsided. Last year, the potato fields produced plentiful and healthy crops; the food stores were replenished; and, alas! the church-yards were over-filled with untimely gatherings of human bodies. Now the potatoe may, and we doubt not does, require a highly electrical condition in the soil to aid the decomposition of the ammonia brought down in rain, and, this condition wanting, the accumulation of ammonia would obviously induce putrefaction—which is unquestionably the real nature of the so-called potatoe disease—and not a state of rottenness, between which and putrefaction we have already explained the distinction.

We do not dogmatically pin our faith to these deductions, but we have a right to rely upon them until they are confuted by more abounding facts and better reasoning. And before dismissing this portion of the subject, we may express our opinion that an increased consumption of fuel may have had something to do with the progress of the potatoe disease, when not neutralised by an electrical condition favourable to the healthy growth of that esculent, since we have previously shown that the annual combustion of 35,000,000 tons of coal alone is estimated to generate no less than 450,000,000 tons of ammonia.

And concluding these inquiries, important to all mankind, and not devoid of extreme interest to those whose vocation it is to lead the way in the physical and mental analyses of an age eminently practical, we venture to express the hope that, as far as our limited capacity would permit, we have fulfilled the premises with which we commenced. We may be pardoned for believing that we have established an inseparable connection between those branches in natural science that have hitherto been disconnected. The decomposition of matter, and of the air, during decay, combustion and evaporation, we have shown to afford carbonic acid and the requisite compounds of snow, which snow, during decrystallization, yields water and ammonia, descending in the shape of rain, to be again decomposed by the vegetable kingdom—the carbon of the carbonic acid and the hydrogen of the ammonia being retained by the plant, whilst the oxygen and nitrogen *regenerate* the air which had been decomposed by combustion and respiration—and thus completing the chain of facts in perfect unity, and in harmony, such as the creative intelligence of divinity could alone conceive and accomplish. We have endeavoured to connect with this the electrical condition of the upper regions, known to be intensely cold; and have offered evidence of the identity of cold and free electricity—of that electricity which we have contended to be the bond of matter, the attractive cohesion of particle with particle. And, following out the train of reasoning, with Franklin Coxworthy aiding us, both as discoverer and guide, we have produced proofs of the not less novel than conclusive facts, that matter increases in weight by compression and contraction; and that gravitation is referable to electrical condition.

Of the application of these discoveries, wonderful as they are both in nature and extent, we say nothing at present. Our immediate object will be attained if we procure for our friend the attention he deserves from those who, however eminent as men of scientific renown, must commence an examination of his doctrines with preconceptions utterly at variance with his conclusions, and to whom, therefore, his new doctrines must be so many stumbling blocks, unless they make them, by frank adoption, stepping stones to yet higher attainments. We ask their attention, in the certitude of their conviction; if they give it honestly, and examine fully, to that result it may bring them; or, if right themselves, and if Franklin Coxworthy be wrong, at least let them controvert his positions by the maintenance of their own. Sooner or later, one or the other they must do, or the public will decide against them; and, by as many months as they delay, after this citation before the court of public opinion—thus first made, and hereafter more amply to be promulgated—by so much deeper will be their ultimate condemnation.—S: *Cheltenham Journal.*

ROYAL COLLEGE OF CHEMISTRY,
OXFORD STREET, LONDON.

The PRACTICAL COURSE OF INSTRUCTION in this INSTITUTION is under the direction of Dr. A. W. HOFMANN and Assistants.

The SUMMER SESSION will COMMENCE on MONDAY, the 11th of March next, and end on Saturday, the 27th of July, 1850.

The FEE for students working every day during the session, is £15 0 0
" " " four days in the week, is 12 0 0
" " " three days in the week, is 10 0 0
" " " two days in the week, is 8 0 0
" " " one day in the week, is 5 0 0

Hours of Attendance from Nine to Five.

Further particulars may be obtained on application at the College.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular
MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY

BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

EASTERN COAST OF CENTRAL AMERICA COMMERCIAL AND AGRICULTURAL COMPANY.
—At a Meeting of Debenture Holders held at the London Tavern, on the 19th February, it was resolved,—That the report of the committee, appointed on the 13th December last, be adopted; and that, for the purpose of obtaining a renewed grant from the Guatemalan Government, the sum of 5s. per debenture be raised, and that the sum of 2s. 6d., part thereof, be paid at the office of Mr. N. Lindo, 17, King's Arms-yard, Moorgate-street, solicitor, on or before the 15th day of March next, between the hours of Eleven and Three, to whom the debentures must be presented, and a receipt will be given for the said payment.

February 22, 1850.

NATAL COMPANY.—(Provisionally registered, pursuant
to 7th and 8th Victoria, chapter 110.)—Capital £200,000 (with power of increase), in 10,000 shares of £20 each. Parliamentary deposit 2s. per share.—This company has been established for the purpose of PROMOTING EMIGRATION, for the acquisition and re-sale of land, and for the cultivation of cotton and other produce in the favoured and rising British colony of NATAL. Communications from parties taking an interest in the objects of the company are invited by the provisional committee of management, and may be addressed to Joseph Steer Christopher, Esq. (of Petermaritzburg, Natal), at the North and South American Coffee-house, City; or to the solicitors, from whom prospectuses and full particulars may be obtained.

WATHEN and PHILLIPS, Solicitors to the Company, 18A, Basinghall-street.

NATAL COMPANY (Provisionally Registered).—Promoter,
Joseph Steer Christopher, Esq., of Petermaritzburg, Natal.—A PUBLIC MEETING will be HELD on Monday, the 11th of March next, at the Albion Hotel, Aldersgate-street, when the attendance of any parties taking an interest in this favoured British colony is requested. In the meantime applications for prospectuses, &c., may be made to Joseph Steer Christopher, Esq., at the North and South American Coffee-house, City; or to WATHEN & PHILLIPS, Solicitors to the Company, 18A, Basinghall-street.

N.B.—The chair will be taken at half-past Seven in the evening precisely.

ELECTRIC TELEGRAPH BETWEEN FRANCE AND ENGLAND,
BY A SUBMARINE COMMUNICATION ACROSS THE CHANNEL.

Ten years' exclusive privilege granted by the French Government. This French Company is constituted as a *Société en Commandite*, under the firm of "JACOB BRETT, TOCHE, & CO."—Capital 750,000 fr. (£30,000), in 6000 shares of 125 fr. each (£5).

BANKERS IN LONDON—Messrs. Masterman, Peters, and Co.
PROVISIONAL AUDITORS—A. Devaux, Esq., London; T. Uzielli, Esq., London; M. Ed. Aimé, Paris.

By order of the managers, the subscription opened at C. Devaux and Co.'s will be closed on the 25th inst., after which day no application for shares will be received.

62, King William-street, City, Feb. 21, 1850.

LOANS ON DEBENTURES.—The CALEDONIAN RAILWAY COMPANY
are prepared to RECEIVE TENDERS OF LOANS, in sums not less than £500.—Applications to be made or addressed to this office.

By order,
125, George-street, Edinburgh, Dec. 1, 1849. D. RANKINE, Treasurer.

ENGLISHMEN! shortly will be published, an EXPOSITION
of the PARSIMONIOUS SYSTEM ADOPTED in the WORKING of COLLIERIES in ENGLAND and WALES—showing the Cause of Explosions and other Casualties in Mines, and consequent wholesale destruction of human life—together with the necessity for Government Inspection of Collieries—Coercive Enactments to Enforce the known Means of Safety—Statistics, &c., in the form of an Appeal to Parliament and to the Public generally. Price 2s. 6d.—By C. COLWELL, Borough-road, Southwark.

N.B.—As the number of copies will be limited—beyond those intended for Members—orders should be given immediately to any bookseller in your neighbourhood.

THE MINING ALMANACK for 1850: compiled and arranged
by HENRY ENGLISH, Mining Engineer, &c. Under the especial sanction and patronage of H.R.H. PRINCE ALBERT, Lord Warden of the Stannaries, Chief Steward of the Duchy of Cornwall, Devon, &c.—THE SECOND VOLUME will appear early in MARCH next, with ADDITIONAL TABLES and STATISTICS, connected with the Mining Interests.—Names of subscribers are requested to be addressed to Mr. H. English, 25, Fleet-street.

SEWERAGE OF LONDON.—The ATTENTION of the
COMMISSIONERS appointed to determine upon the MOST EFFICIENT MATERIAL for the CONSTRUCTION of the SEWERS OF LONDON, is particularly directed to the ASPHALTE OF SEYSSEL, which more than any other material is applicable to the CONSTRUCTING and INTERNAL COATING of BRICK CULVERTS and OTHER CHANNELS for DRAINAGE.

The experiments made by the Royal Artillery on the embrasures of Plymouth Citadel, constructed of Seyssel Asphalte Brickwork, under the orders of the Hon. Board of Ordnance, have fully proved the superiority, adhesiveness, and strength of Seyssel Asphalte over all other cementitious compositions. A printed account of these experiments can be had on application to I. FARRELL, Secretary,

Seyssel Asphalte Company—"Claridge's Patent"—Established 1838.

Note.—The application of the Asphalte of Seyssel is specially recommended by the Commissioners on the Fine Arts for covering the ground line of brickwork in marshy situations, and it has been suggested that it would be peculiarly applicable for covering the *areas* of closed *grave yards*, and for the construction of *catacombs*.

NORTH KENT RAILWAY AND LONDON SPRING-WATER COMPANY.—The Select Committee on Standing Orders have decided that the Standing Orders be not disposed with in favour of the promoters of this measure, proposed by Mr. Barlow, the engineer of the South-Eastern Railway, to the chairman and directors of that company, and who states that the district through which the railway passes contains such an abundance of water from the chalk formation, as would be sufficient, conveyed by pipes along the rail, for the supply of spring water to all London, and the towns along the line. The supplies from the springs in different localities are estimated at between 200 and 300 gallons per minute, and the required supply of London of 100,000,000 gallons per day might, it is contended, be adequately met. The estimated cost of bringing the water to the proposed terminus at the Bricklayers' Arms, in the Old Kent-road, for the supply of the south side of the Thames, is 150,000*l.*

The Whittle Dean Water Company, of Newcastle, have declared a half-yearly dividend of 10s. per share on the 25*l.* shares, and also a like rate on the third shares, being at the rate of upwards of 4 per cent. per annum, payable on the 27th inst., free from income tax. The net profits of the company are stated to be 3968*l.* 3s. 4d. After payment of the dividend, a balance amounting to 916*l.* 10s. 9d. is carried to the credit of next account.

BRITISH TELEGRAPH COMPANY.—In the House of Commons, last night, Mr. Pinney moved the second reading of the new telegraph company's bill.—Mr. Ricardo opposed it. He said the whole capital required was only 100,000*l.*, and it was an attempt to extort money from the old company. He moved an amendment that it be read a second time that day six months.—Mr. Labouchere objected to one clause as to limited liability; but should not oppose the second reading.—Mr. Ricardo then withdrew his amendment, and proposed another, that the bill be read a second time that day week; but the house divided, when there were for the second reading, 75; against it, 12; majority, 63.

COAL MARKET, LONDON.
PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 15 3—Buddle's West Hartley 15 6—Carr's Hartley 15 6—East Adairs Main 14—Hastings Hartley 15 9—Holywell 16 9—North Percy Hartley 15 3—New Tanfield 15—Ord's Redheugh 14 6—Ravensworth West Hartley 15 6—Tanfield Moor Butes 14 6—Townley 16—West Hartley 15 9—Windsor's Pontop 14 6—Wall's-End Harton 17 3—Hotspur 16 6—Northumberland 16 6—Eden Main 18—Belmont 18—Braddyll 18 6—Hetton 19—Haswell 19—Lambton 18 6—Lumley 17 6—Stewart's 19—Kelloe 18 6—South Kelloe 17 6—Belmont 17 9—Tees 19—Whitfield 15 3—Cowpen Hartley 15 6—Hartley 15—Sidney's Hartley 16.—Ships, 424; sold, 66.

WEDNESDAY.—Carr's Hartley 15 6—East Adairs Main 13 6—Hastings Hartley 15 9—Holywell 16 9—New Tanfield 15—Old Tanfield 14—Ord's Redheugh 14 6—Ravensworth West Hartley 15 6—Tanfield Moor Butes 14 6—West Hartley 15 9—Windsor's Pontop 14 6—Wall's End Brown 15 6—Hetton 19—Haswell 19—Jonassohn's 16 6—Russell's Hetton 18 6—Stewart's 19—Heugh Hall 17 6—South Kelloe 17 6—South Hartlepool 17 9—Whitworth 14 9—Maclean's Tees 16 6—South Durham 17 3—Tees 19—Hartley 14 9—Sidney's Hartley 15 9.—Ships at market, 488; sold, 88.

FRIDAY.—Carr's Hartley 15 6—East Adair's Main 13 6—Hastings Hartley 15 6—Ord's Redheugh 14—Ravensworth West Hartley 15 6—Townley 15 6—West Hartley 15 9—Wall's-End Brown 15 6—Braddyll 18 6—Hetton 19—Lambton 18 6—Hartlepool 19—Kelloe 18 6—South Hartlepool 17 9—West Hetton 17 6—Whitworth 14 6—Maclean's Tees 16 6—South Durham 17 3—Birchgrove Craigola 21—Cowpen Hartley 15 6—Derwentwater Hartley 15 6—Hartley 14 9—Sydney's Hartley 15 6—Ships at market, 448; sold, 61

BY HER MAJESTY'S ROYAL LETTERS PATENT.

DUNN'S IMPROVED MODE of REMOVING RAILWAY CARRIAGES FROM ONE LINE TO ANOTHER.
The ADVANTAGES of the PATENT TRAVERSERS over those in ordinary use are, that there is no expensive gear attached, and they are not liable to get out of order; they are easily cleaned and oiled; the foundations are formed upon the simplest sleepers; the cross tram-rails are upon a level with the permanent rails, leaving no break or recess whatever, and the roads are as firm and steady as the general line. The whole of the gear is simple, strong, and inexpensive, compared with others, and leaving considerable more room in a station than turntables, and at a saving of from 200 to 300 per cent. over the same. One of these Trucks is now working 10 lines of rails at the Peterborough Station of the Eastern Counties Railway; another at the Salford Station, Manchester; and one is working 9 lines of rails on the Paris and Lyons Railway. It has also been introduced at many smaller stations throughout the country, for goods warehouses, stone quarries, collieries, contracters, &c.; and the engineer and directors of the Lancashire and Yorkshire Railway Company decided to work the chief stations at Liverpool and Bradford by two Traversers in each, working four lines of road per Traverser, in preference to all other plans submitted.

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TESTIMONIALS.

Messrs. W. BRUNTON & Co. *North Pool Mine, Nov.* 27, 1849.

GENTLEMEN,—We have had your Safety Fuse in constant use during the last seven months, and have much pleasure in expressing our own satisfaction with it, and in being able to tell you that we have not had a single complaint of your Fuse made by any of our men during the whole period—though they are particularly instructed to return any bad materials which may be supplied to them.

JAMES EVANS, Manager, FREDERICK EVANS,
JOHN NANCARROW, HENRY JAMES.

Messrs. W. BRUNTON & Co. *Tincroft Mine, Nov.* 27, 1849.

GENTLEMEN,—Since last March, when you commenced manufacturing Safety Fuse, we have had Fuse of your make in daily use in all parts of our mine, and can with strict impartiality state that the article supplied by you has been excellent. In proof of this we may mention, that during the whole of that time we have not had a single accident of any description.

PETER FLOYD, Manager, JOHN THOMAS,
THOMAS STAINSBY, HENRY HOCKEN,
THOMAS LEAN, RICHARD MARTIN.

Messrs. W. BRUNTON & Co. *Wheal Agar Mine, Nov.* 28, 1849.

GENTLEMEN,—There has been a good deal of your Fuse used at our mine, and we can safely pronounce it to be as good an article as we ever saw.

ALEX. EUDEY, Manager, JOSEPH EUDEY.

Messrs. W. BRUNTON & Co. *South Roskear Mine, Nov.* 29, 1849.

GENTLEMEN,—Your Fuse is a capital article, so far as our experience of it goes. It is well made, and certain in its operation. The men have brought no complaints of it, nor has a single accident occurred with it. WILLIAM THOMAS, JOHN DUNKIN.

Messrs. W. BRUNTON & Co. *North Roskear Mine, Nov.* 30, 1849.

GENTLEMEN,—All the Fuse you have sent to this mine, during several months past, has been as good as we have ever had from the other Fuse factories. There has been no fault found with it, nor has there been any accident in using it.

JOSEPH VIVIAN, Manager. JOHN HODGE.

Messrs. W. BRUNTON & Co. *Cook's Kitchen Mine, Nov.* 29, 1849.

GENTLEMEN,—We very cheerfully give our testimony to the good quality of your Fuse—for eight months we have used it, and no accident has occurred.

JOSEPH VIVIAN, Manager, JOHN IVEY,
W. G. HILL, RICHARD BENNETTS.

Messrs. W. BRUNTON & Co. *Carn Brea Mine, Nov.* 29, 1849.

GENTLEMEN,—We have used 9000 coils of your Fuse in our mine in the course of the last eight months; and have pleasure in stating that not a single case of accident has arisen therefrom, and we consider your Fuse as good as any that is made.

R. H. PIKE, Purser, ABSALOM BENNETTS,
JOHN LENTEN, } Managing JOHN VIVIAN,
JAMES MINERS, } Agents. JOHN JAMES,
WILLIAM ROBERTS, JOHN DAW.

Messrs. W. BRUNTON & Co. *Penhellick Fuse Factory.*

GENTLEMEN,—We have used, and are still using, your Fuse, and have no hesitation in expressing our conviction that it is, in all respects, entitled to the character of *Safety* Fuse—being as good an article, and as safe in use as any we have seen.

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WILLIAM WILLIAMS, Manager, } Wheal Friendship Mine.
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Messrs. W. BRUNTON & Co. *Prestonpans Colliery, Edinburgh, Sept.* 17, 1849.

GENTLEMEN,—The miners inform me that the Fuses are of excellent quality, and have not lost a single shot since the commencement; while, with some of a very similar appearance we used before, nearly half the charges missed fire. JOHN GRIEVE.

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In 1849, if it then becomes a claim	£1187	4	0				
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Amount with Additions.		Sum of Premiums paid according to Ages at entry.					
At end of Years.	At 2 per cent. per ann.	20.		27.		34.	41.
6	£1120 0 0	£145 5 0	£167 8 4	£196 5 10..	£235 19 2
13	1276 16 0	290 10 0	334 16 8	392 11 8..	471 18 4
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55	2802 10 10	1162 0 0	—	— ..	—

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